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PLANTS

OF THE

COAST OF COROMANDEL;

SELECTED FROM

DRAWINGS AND DESCRIPTIONS

PRESENTED TO

THE HON. COURT OF DIRECTORS OF THE

EAST INDIA COMPANY,

BY

WILLIAM ROXBURGH, M.D.

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1798.

101. SCHREBERA SWIETENIOIDES.*

Mucaadie of the Telingas.
Weaver's-beam tree.

GENERIC CHARACTER.

Calyx two-lip'd. *Corol* from five to seven-cleft. *Capsule* pear-shape, two cell'd, two-valved. *Seeds* from eight to ten, membrane-wing'd.

DESCRIPTION.

Trunk erect. *Bark* scabrous.
Branches numerous, spreading in every direction, so as to form a large, beautiful, shady head.
Leaves nearly opposite, petioled, pinnate with an odd one, about a foot long. *Leaflets* three or four pair, opposite, short-petioled, the lowermost largest, and obliquely ovate, while those towards the apex become more lance-shape; all are entire, pointed, smooth on both sides, and about three or four inches long.
Petioles round, smooth.
Panicles terminal, thin, trichotomous.
Bractes small, falling.
Flowers white and brown variegated; very fragrant during the night.
Calyx beneath, tubular, somewhat two-lip'd: lips nearly equal, emarginate; there are often two lateral toothlets, one on each side, in the divisions of the lips.
Corol one-petal'd, salver-form; *Tube* cylindric, three times longer than the calyx; border spreading, divided into five, six, or seven wedgeform, truncate segments.
Filaments two, short, inserted below the middle of the tube.
Anthers oblong, hid within the tube of the corol.
Germ above, oval. *Style* a little longer than the tube.
Stigma bifid.
Capsule large, pear-shape, size of a pullet's egg, scabrous, very hard, two-cell'd, two-valved.
Seeds four in each cell, irregularly oval, compress'd, with a long membranaceous wing.

OBSERVATIONS.

This is a large timber tree, a native of vallies in the mountainous parts of the Rajahmundry Circar. Its flowering time is about the beginning of the hot season.

The wood is of a grey colour, very close-grained, heavy, and durable; it is reckoned less subject to crack or warp than any other; on which account it is employed by weavers in many parts of their looms, particularly for the beam: it serves also for a great variety of other uses.

I am inclined to think it would answer well for scales to mathematical instruments. It is not so handsome as box, but is not subject to warp.

* Schrebera schinoides of Linnæus, is a species of Cuscuta, growing on Myrica æthiopica. Schrebera albens of Retzius (Celastrus glaucus of Vahl) is a species of Elæodendrum. Schrebera schinoides of Thunberg's prodromus plantarum capensium, is Hartogia capensis Linn. suppl. 128. Thunb. nov. gen. p. 87.

102. OLAX SCANDENS.

Turka Vepa of the Telingas.

Trunk leaning, often as thick as a man's thigh.
Branches numerous, climbing or bowing.
Thorns very large, exceeding strong, like a rhinoceros's horn, scattered over the old woody parts only.
Leaves alternate, two-faced, petioled, oval, entire, smooth, about two inches long, and one broad.
Raceme axillary, solitary, half the length of the leaf, few-flowered.
Flowers small, white.
Calyx cup-form, entire, permanent, and enlarging with the fruit.
Corol bell'd. *Petals* three: 1, 2 or all 3 half two-cleft: divisions linear, spreading. *Nectary*, a bifid, filiform, yellow body rises from the inside of the base of each division of the petals.
Filaments three, short, between the nectaries, inserted into the petals, below their fissures.
Anthers oblong.
Germ above, egg'd.
Style length of the corol.
Stigma simple.
Berry globular, three-fourths covered with the enlarged calyx, yellow, pulpy.
Seed single, globular.

A large, climbing shrub; a native of forests; flowers all the year round.

103. CANSIERA SCANDENS.

Cansjera. *Juss. gen.* 448.

Leaves alternate, two-faced, short-petioled, broad-lanced, smooth, entire, about three inches long, and one broad.
Spike axillary, generally single, short, every where covered with flowers.
Bractes solitary, small, oval, one-flower'd.
Flowers small, sessile, yellow.
Calyx below, one-leaved, bellied: mouth four-tooth'd.
Corol none, except the calyx or nectary is such.
Nectary four-leaved, hearted, acute, half the length of the calyx, inserted round the base of the germ, and embracing it.
Filaments four, inserted into the base of the calyx, and shorter than it.

Anthers oval, within the calyx.
Berry oblong, smooth, red, juicy, size of a pea, one-cell'd.
Seed single, shaped like the berry.*

A large, woody, climbing shrub, a native of the Circar mountains. I know of no use this is applied to.

104. CUSCUTA REFLEXA.

Sitamapongonooloo of the Telingas.

Stems, or *Branches* thread-form, succulent, twining, very ramous, leafless, smooth, yellow.
Racemes numerous.
Flowers white, short-pedicel'd.
Calyx 5-leaved: leaflets hearted, permanent.
Corol: tube cylindric, mouth five-parted: divisions reflex.
Nectary: five bearded scales surround the germ, and are inserted into the bottom of the tube.
Filaments five, very short.
Anthers oval, half appear above the mouth of the tube.
Style scarce any.
Stigmas two, large, fleshy, expanding, pointed.
Capsule berry-like, circumcised, as in the genus.

This plant is parasitical, and appears during the cold season.

105. MENYANTHES CRISTATA.

Antara-jamara of the Telingas.

Roots annual, fibrous.
Leaves radical, petioled, hearted, with large, rounded, posterior lobes: lobes overlap a little; margins waved, smooth, above green, with a purplish tinge; size very various, the larger are from four to six inches long.
Petiole round, length various; on the upper side, about two inches below the leaf, there are tubercles which bear flowers, other leaves, and roots; the old leaf and the parent petiole decaying, leaves a new plant, each petiole in succession doing the same.
Peduncles many, from the above mentioned tubercles of the petiole, one-flower'd, and of length sufficient to raise the flowers a little above the water, when expanded; afterwards they bend under water, and there ripen their seeds.
Flowers pure white, about an inch in diameter.

* Description by Dr. Koenig.
Rami alterni, patentissimi, bifarii.
Folia alterna, bifaria, patentissima vel reflexa, petiolata, ovato-oblonga, integerrima, glabra, subcarnosa, obscure viridia. Petioli breves.
Spicæ axillares, solitariæ, simplices, foliis breviores, vix pollicares. *Flores* approximati, patentes. *Bracteæ* solitariæ, lanceolatæ, pilis adspersæ, flore multo breviores.
Calyx nullus.
Corolla monopetala, urceolata, viridis, pilis albicantibus adpressis tecta: *Limbus* quadripartitus, patens, glaber, lutescens: laciniæ ovatæ, æquales.
Filamenta 4, basi corollæ adnata, vix longitudine tubi. *Antheræ* cordatæ, ferrugineæ, parvæ.
Nectaria 4, germini adpressa, oblonga, apice bidentata, carnosa, corolla dimidio breviora.
Germen oblongum. *Stylus* erectus, crassus, brevis. *Stigma* capitatum, planiusculum.
Bacca ovalis, glabra, aurantiaca, magnitudine fructus coffeæ. *Semen* unicum, ovale, osseum, tenue tamen.

Calyx five-leaved: leaflets broad-lanced, permanent.
Corol one-petal'd: divisions of the border oblong, expanding, with broad membranaceous, waved, curl'd, ragged, margins; down the middle of each there runs a ridge or wing, exactly similar to half of one of the divisions: no hair on the flowers.
Nectary triple: exterior: white, ramous filaments, crown the mouth of the tube of the corol, as in Nerium; middle: five beautiful yellow, glandulous bodies, nearly fill the mouth of the tube, standing alternately with the filaments; interior: five hairy yellow bodies, surround the base of the germ.
Filaments inserted into the tube of the corol near its base.
Anthers oval.
Style short.
Stigma two-cleft: segments large and lobed.
Seeds a little compress'd, rugged.
Receptacles opposite, running down the inside of the capsule.

A native of tanks, or pools of fresh water, where it floats, often not reaching the bottom with its roots. Flowering time the wet and cold season.

106. CINCHONA EXCELSA.

Bundaroo of the Telingas.

Trunk straight, of considerable thickness and height.
Branches numerous, spreading. Bark of the trunk pretty thick: the exterior lamina grey, light, corky, cracks in various directions, and frequently peels off; the middle coat is brown, of a farinaceous nature, and as thick as both the exterior and interior coats; the interior is white. The fresh bark is here described.
Leaves opposite, petioled, elliptic, entire, soft, downy, particularly the under side; veins simple, and frequently opposite; from six to twelve inches long, and from three to five broad. Floral leaves: the lower pair, or two of the ramifications of the panicle, are ornamented each with a pair of leaves in shape like the rest, but much smaller, colour'd, bubbled.
Petiole round, downy, two or three inches long.
Stipules within the leaves, half lanced, sharp, saw'd, erect, falling.
Panicle terminal, large, generally with the lower ramifications cross-arm'd.
Flowers fascicled, small, greenish-white, exceedingly numerous, exquisitely fragrant.
Calyx above, five-tooth'd.
Corol one-petal'd, funnel-form, downy: tube long; border five-parted: divisions oval, spreading, not half the length of the tube.
Filaments five, short, inserted into the mouth of the tube.
Anthers one-third of them within the tube.
Germ oval.
Style twice the length of the tube.
Stigma headed.
Capsule oblong, crowned with the remains of the calyx, about as thick as a field bean, but twice as long, four-striate, marked with small white, elevated, scabrous, specks; two-cell'd, two-valved, opening from the top, partition contrary. *Receptacle* slender, angular, length of the capsule, affixed lengthwise to the suture of the partition.
Seeds from 6 to 12 in each cell, chesnut-colour'd, imbricate, oblong, compress'd, enlarged all round by a membranaceous jagged wing, which at the base is split up to the seed itself.

A native of the mountainous parts of the Circars, but chiefly of the vallies, where it grows to a very large tree. Flowers during the rainy season. Seeds ripe in four or five months after.

One fresh leaf infused in water for a night, imparted little taste to the water, though a chalybeate, when added, struck quickly a deep purplish blue. The two inner coats of the bark possess both the bitterness and astringency of Peruvian bark, and, I think, when fresh, in a stronger degree: the bitterness, however, is not so quickly perceived by the taste on chewing, as that of the Peruvian bark, but is much more durable, and chiefly about the upper side of the fauces. The outer light spongy lamina is tasteless.

The wood is firm, close grained, of a pale mahogany colour.

107. TRADESCANTIA AXILLARIS.

Linn. Mant. 321.

Commelina axillaris. *Linn. spec. plant.* 61.
Golla-gundy of the Telingas.

Root fibrous, annual.
Stem in young plants is erect, but in the old, procumbent, and appears like one of the many long creeping branches that issue from its base; all are round, smooth, jointed, often colour'd.
Leaves alternate, sheathing, half-lanced, spreading, striated: mouth of the sheaths fringed.
Flowers axillary, two or three, but in succession, so that there is never more than one expanded at a time; they are pretty large, and of a deep, beautiful blue-purple colour.
Calyx membranous, three-parted.
Corol one-petal'd, funnel-form: tube cylindric, twice as long as the calyx; segments three, hearted.
Filaments six, length of the corol, and inserted into its tube near its base, towards the apex swelled into an oblong, pellucid body, and a little below surrounded with beautiful, jointed hairs.
Anthers incumbent.
Germ above, three-sided.
Style length of the stamens, and near the apex, swelled like the filaments.

A native of moist pasture ground, and borders of paddy fields. Appears and flowers during the wet and cold seasons.

Cattle are very fond of it.

108. TRADESCANTIA TUBEROSA.

Root tuberous, perennial.
Stems several, creeping, round, jointed; from six to thirty inches long; besides, a tuft of three or four liliaceous, sword-form leaves issuing immediately from the heads of tuberous roots, or rather their sheaths, form a head, from which issue the roots and procumbent stems.
Leaves of the stems linear-lanced, sheathing, striated, under side tinged with purple, downy.
Spikes terminal, or from the exterior axills, one, or two together, peduncled, beautifully imbricated, as in Tradescantia cristata, with two rows, of falcate, ciliate bractes.
Flowers, one in the axill of each bracte, small, blue-purple.
Corol, *Stamens*, and *Pistil*, as in Tradescantia axillaris.

A native of moist vallies.

109. TRADESCANTIA PANICULATA.

Conda Amadicada of the Telingas.

Root fibrous, annual.
Stems creeping, with their extremities erect, jointed, smooth.
Leaves lanced, sheathing; mouth of the sheath woolly.
Panicle terminal, globular, many-flower'd, hairy.
Flowers small, blue.
Calyx three-leaved, hairy.
Corol three-parted: the superior two divisions large and egg'd, the third lanced.
Filaments simple, inserted round the germ, as long as the petals, without hairs or swelling.

Is also a native of moist vallies.

110. PONTEDERIA VAGINALIS.

Linn. Mant. 222.

Neeroo Cancha of the Telingas.

Root creeping, with many fibres, perennial.
Leaves radical, narrow-hearted, pointed, entire, smooth, glossy, from two to four inches long, and from one to two broad.
Petiole sub-erect, tapering, fistulous, smooth; six to twelve inches long; those that bear a raceme, are swelled a little about the middle, and there burst open (spath-like), lengthwise, near the base; those that do not bear flowers are enlarged into a sheath, which embraces the interior leaves.
Spath small, membranous, embracing the peduncle.
Raceme short-peduncled, after flowering time bowing, six to twelve flower'd.
Pedicels about three quarters of an inch long.
Flowers blue.
Petals six: the three exterior are smallest and oblong; the three interior inverse egg'd.
Filaments ascending, inserted round the base of the germ: the lowermost one is generally broad and two-cleft, the inferior division of which bears the anthers, the other nothing; the anther of this filament is blue, the rest are yellow.
Germ above.
Style single.
Stigma glandulous.

Is a native of fresh water, or of marshy places; flowers during the rains.

The figure is rather smaller than nature.

111. PONTEDERIA HASTATA.

Linn. spec. plant. 412.

Neroo Tamara of the Telingas.

Root perennial, thick, spongy, creeping; when long, a little winding, with many fibres issuing from every part.
Leaves radical, those that bear the flowers are a little more elevated, but in no other respect differing from the rest, broad-arrow'd, or triangular, very entire, pointed, very smooth, and glossy;

about six or seven inches long, and five or six broad: posterior angles generally obtuse.

Petiole, the flower-bearing longest, and groov'd a little, near the apex swell'd, and there on the fore-part splits, sheath-like, for the passage of the raceme. The other petioles swell near the base into a large sheath, which embraces those within them; they are tapering, sometimes spotted with small purple dots, from eighteen to twenty-four inches long, and not groov'd like the flower-bearing petioles.

Spath egg-hearted.

Raceme sessile, erect, sub-globular.

Flowers very numerous, pedicel'd, surrounding closely every part of the raceme, those nearest the apex begin to expand first, and continue in succession down; they are large, and of a beautiful, bright, blue, colour.

Pedicels round, smooth, about an inch long.

Petals six, withering: the three interior largest, inverse egg'd; the three exterior, oblong.

Filaments six, short, the lower one rather longer than the others, two-cleft (*a*), or double (*b*).

Anthers linear, erect, the lowermost one is much larger, or double, blue; the rest are yellow.

Germ above, egg'd.

Style single ascending, rather longer than the stamens.

Stigma downy.

Is a native of marshy places, or shallow, standing fresh water. Flowers during the rainy, and cold season.

The figure of this is also smaller than nature.

112. BERGERA KOENIGII.

Linn. Mant. 563.

Carri-vepa of the Telingas.
Karuvepelie of the Tamuls.

This grows to a small tree; a native of the mountainous parts of the Circars, and is cultivated in gardens for the sake of its leaves. Its flowering time, the hot season.

The leaves are a principal ingredient in the country stews called Curries; and when they cannot be had fresh, they are used dry; for they retain their flavour when dried, and in that state are to be found in every bazar (market). They have a peculiar flavour, which I cannot describe; at first rather disagreeable, but most people soon become, at least reconciled to the taste, if not fond of it.

The bark and roots are used internally as stimulants, and externally, as a remedy for certain eruptions, as also for the bite of poisonous animals. The green leaves are prescribed to be eaten raw for the cure of the dysentery; and when bruised, are, like the bark and roots, applied by way of cataplasm.

113. DALBERGIA LATIFOLIA.

Viroogooduchawa of the Telingas.
Blackwood Tree of the English.

Trunk erect, often very thick, and rising to a very great height.

Branches spreading, very numerous, forming a large shady head.

Leaves alternate, feather'd, with an odd one; from six to nine inches long. *Leaflets* from three to seven, generally five, alternate, the exterior largest, roundish, emarginate, a little waved, above smooth, below covered with a little whitish down, generally about two inches each way.

Petioles common, round, smooth.

Stipules none.

Panicles axillary, small, erect.

Flowers papilionaceous, small, white.

Calyx hoary, five-tooth'd.

Filaments ten, united into one, open above.

Anthers twin, singly globular.

Germ pedicel'd, smooth.

Stigma simple.

Legume pedicel'd, lanced, compress'd, leafy, brittle, when ripe falling, not opening; about an inch broad, and two and a half, or more, long.

Seed, generally but one in the centre of the legume, kidney-form, smooth, compress'd, brown, size of a very small french bean.

This is one of our largest mountain trees; flowers during the wet season; seeds ripe in February and March.

The wood of the centre of the trunk and large branches, is what is commonly called Black wood, and used almost universally for making household furniture. Its colour is a greyish black, with light-coloured veins running in various directions, and giving it that beautiful appearance so much admired. It is heavy, sinking in water, close grained, and admits of the finest polish. On the Malabar coast the tree must grow to an immense size, as I have seen planks from thence sometimes full 3½ feet broad, and if we allow nine inches of white wood to have been on the outside, the circumference must have been 15 feet, exclusive of the bark.

114. DALBERGIA PANICULATA.

Patseroo of the Telingas.

Trunk erect.

Branches numerous, spreading, forming a very fine, close, shady head. *Branchlets* ascending.

Leaves alternate, two-faced, feather'd, with an odd one, four or five inches long. *Leaflets* generally from three to five pair, alternate, oblong, smooth, often end-nick'd, nearly equal, about half an inch long, and about one broad.

Panicles terminal, leafy, large, generally two-faced, ramifications alternate, round, downy.

Flowers numerous, small, white, with a faint tinge of blue.

Calyx deep blackish purple, and hairy.

Wings as long as the banner.

Keel half the length of the wings, two-petal'd, only slightly united a little at the middle.

Filaments two, lateral, equal, ascending, each divided into five.

Anthers twin, singly globular.

Legume and *Seed* exactly as in Dalbergia latifolia.

This also is a large tree, and a native of the Circar mountains. Flowers about the beginning of the hot season.

The wood is white and firm, but less useful than that of the former species.

115. DALBERGIA RUBIGINOSA.

Tella-tiga of the Telingas.

Trunk large, woody, running over the highest trees. The *Bark* rust-colour, pretty smooth. *Branchlets* alternate, two-faced, winding, short, rigid, erect.
Leaves alternate, two-faced, feather'd, with an odd one, from four to six inches long. *Leaflets* generally three pair, alternate, sessile, oblong: the exterior several times larger than the interior; smooth on both sides, entire, firm, with many very fine parallel veins: the exterior one about two and a half or three inches long, and three-fourths broad.
Petiole round, downy.
Stipules oval, small, covered with goose-dung-green-colour'd down.
Spikes axillary, compound, small.
Peduncles downy.
Bractes small, downy.
Filaments ten, conjoined as in Dalbergia latifolia.

A large, woody, climbing species, a native of the mountains. Flowers during the hot season.

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116. PTEROCARPUS MARSUPIUM.

Yeangashaw of the Telingas.

Trunk erect, very high. *Bark:* outer coat brown, spongy, falling off in flakes; inwardly red and fibrous.
Branches spreading, horizontal, very numerous.
Leaves nearly two-faced, alternate, feather'd with an odd one; eight or nine inches long. *Leaflets* alternate, oval, emarginate, firm, above shining, deep green, below less so; from three to five inches long, and about two or three broad.
Petiole round, smooth, waved, from leaflet to leaflet, five or six inches long.
Stipules none.
Panicle terminal, very large, two-faced: branches alternate, spreading, horizontal.
Peduncles and *Pedicels* round, a little downy.
Bractes: a small falling one below each division and subdivision of the panicle.
Flowers papilionaceous, very numerous, white, with a small tinge of yellow.
Banner with a long slender claw, very broad: sides reflex, waved, curl'd, vein'd.
Wings with claws, as above, oval, waved, curl'd, vein'd.
Keel two-petal'd; adhering slightly for a little way near the middle only, waved as the banner.
Filaments ten, united into one body near the base, but soon split into two: these are again each subdivided into five.
Anthers globose, two-lobed.
Germ oblong, pedicel'd, hairy.
Style ascending.
Legume: the lower three-fourths or more, orbicular; the upper side, which extends from the pedicel to the remains of the style, straight; the whole surrounded with a waved, vein'd, downy membranous wing, is swell'd, rugose, and woody in the centre,

where the seed is lodged, not opening, generally one, sometimes two-cell'd.
Seed solitary, kidney-form.

This species grows to a very large tree; it is a native of our Circar mountains. Flowering time, the wet season.

The wood is much esteemed by the natives, and serves for various uses. It is of a yellowish, orange-colour, very hard and durable, but, at the same time, not very heavy.

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117. MANISURIS MYURUS.

Linn. Mant. 300.

Nalla Panoocoo of the Telingas.

Culms several, ramous, diffuse near the base, rooting at the joints, extremities ascending, from nine to eighteen inches long, as thick as a crow's quill, compress'd, smooth, not piped.
Leaves small and smooth, mouth of the sheath increased by a lacerated, membranous border (*a*).
Spikes generally solitary, terminal, and from the exterior axills, peduncled, halved, jointed, smooth, a little compress'd; one or two inches long.
Peduncle jointed, and bracted at the middle.
Flowers: the hermaphrodite occupy a waved row of pits, on the foreside of the spike; while the male possess the two sides; the back is naked.

HERMAPHRODITE FLOWERS.

Calyx two-valved, one-flower'd: exterior valvelet has a broad, colour'd margin, which is end-nick'd, and deeply indented at the sides; inner valvelet oblong, lodged in the pit of the rachis.
Corol two-valved, membranous.
Nectary: two white, inverse-egg'd, crenulated scales, embrace the germ.
Stamens three.
Styles two.

MALE FLOWERS.

Calyx two-flower'd, two-valved: valvelets nearly equal, boat-shape.
Corol, each has two membranous valves.
Stamens three.
Pistil none.

A native of dry, elevated, sandy ground.

Explanation of the Figures.

a. Mouth of the sheath of one of the leaves, a little magnified.
b. Part of the foreside of a spike.
c. Part of the back of the same.
d. Calyx of the hermaphrodite flower.
e. Corol of the same.
f. Its germ, &c.
gg. Nectary.
h. Calyx of the male flower.
i. The two male florets.
All are much magnified.

118. MANISURIS GRANULARIS.

Linn. fil. nov. gram. gen. in Amoenitat. Acad. 10. *p.* 40. *t.* 1. *fig.* 4—7.
Swartz Prodr. 25. *Gærtn. sem.* 2. *p.* 468. *tab.* 175.
Cenchrus granularis. *Linn. Mant.* 575.

Culms very ramous, nearly erect, filiform, hairy, from one to two feet high.
Leaves numerous, very hairy: hairs stiff and sharp.
Spikes terminal and axillary, peduncled, several together, small, compress'd, from half of an inch to one inch long.
Peduncle as in the former.
Rachis jointed, much waved and excavated, as usual.
Flowers from four to ten of each sort, their situations exactly as in the former, viz. the hermaphrodite occupy the fore part, while the male or neuter are placed on the sides; the former are globular, and the latter lanced.

HERMAPHRODITE FLOWERS.

Calyx one-flower'd, two-valved: exterior valve round, rigid and very rugose; inner valve oval, less rigid.
Corol two-valved, membranous.
Stamens three.
Styles two.

MALE OR NEUTER FLOWERS.

Calyx two-valved, one-flower'd.
Corol two-valved.
Stamens three, or wanting.

Grows among the bushes.

Both species are of a very coarse nature; cattle do not eat them.

Explanation of the Figures.

a. Front of a part of the rachis.
b. An hermaphrodite flower.
c. A male flower.
d. A neuter flower.
All are much magnified.

119. MIMOSA NATANS.

Vahl symb. 3. *p.* 102.

Neptunia oleracea. *Loureyro cochinchin.* 654.
Niti-todda-vaddy. *Rheed. mal.* 9. *p.* 35. *t.* 20.
Neroo-tavalapoo and Nidra-guny of the Telingas.

Branches or *Stems* round, jointed, winding, piped, with tufts of radical fibres from the joints; between the joints spongy bodies are formed, which prevent the plant from sinking; the roots have not any connection with the earth, except when the water leaves it, and then the plant soon perishes.
Leaves alternate, two-faced, twice-feather'd. *Feathers* two or three pair, opposite. *Leaflets* eight to twelve pair, minute, smooth. They are in my opinion sensitive, in degree next to that of Mimosa pudica.
Stipules hearted, falling.
Peduncle axillary, single, longer than the leaves, supporting an oblong head of fertile and neuter flowers.
Bractes solitary, lanced, one-flower'd.

FERTILE FLOWERS above.

Calyx five-tooth'd.
Corol five-petal'd.
Filaments ten, distinct.
Legume oblong, acute, smooth, six to eight-seeded.

NEUTER FLOWERS below.

Calyx and *Corol* as in the genus; but the ten stamens are here ten linear-lanced, waved, yellow petals.*

It is annual, and found growing on pools, and lakes of fresh water. Flowering time, the wet and cold seasons.

120. MIMOSA ODORATISSIMA.

Linn. suppl. 437. *Vahl symb.* 3. *p.* 102.

Shinduga of the Telingas.

Leaves about the ends of the branchlets, twice-feather'd, about a span long. *Feathers* opposite, two to five pair. *Leaflets* opposite, eight to twelve pair, linear-oblong, a little acute, smooth, about an inch long: the lowermost pair is generally very small and unequal. *Glands* uncertain, except one near the base of the common petiole.
Panicle terminal, large, composed of ramifications of pedicel'd pale yellow, fragrant, globular heads of corollets.
Filaments numerous, united below.
Legume leafy.
Seeds eight to ten, lodged in the middle.

This is a large tree, and a native of the mountainous parts of the Coast. Flowering time, the hot season.

The wood is like that of the Mimosa xylocarpa, and equally useful.

121. MIMOSA PROCERA.

Pedda Patseroo of the Telingas.

Trunk straight.
Head very large and dense.
Leaves alternate, twice-feather'd, twelve to eighteen inches long.

* Description by Dr. Koenig.

Folia glandulis destituta.
Pedunculi ex axillis foliorum, solitarii, erecti, teretes, glabri: basi incrassati, rubri; superne virides; foliis longiores. *Flores* in umbellam oblongo-globosam collecti, subsessiles: inferiores neutri, patentissimi; intermedii masculi, erectiores; summi hermaphroditi.

FLORES NEUTRI.

Calyx campanulatus, quinquefidus, tenuis, albicans.
Petala quinque, ovato-lanceolata, acuta, glabra, virentia, calyce triplo longiora.
Filamenta petaloidea decem, linearia, plana, citrina, staminibus floris masculi multo longiores.

FLORES MASCULI.

Calyx paulo major, erectior.
Corolla ut in neutro.
Filamenta decem, basi distincta, erecta, glabra, alba, corolla multoties longiora. *Antheræ* oblongæ, versatiles, citrino-virides.
Germen nullum. *Stylus* erectus, staminibus crassior et multo brevior, glaber, apice clavatus.

FLORES HERMAPHRODITI.

Calyx ut in mare, parum longior.
Corolla et *Stamina* ut in mare.
Germen oblique oblongum, compressiusculum. *Stylus* erectus, apice incurvatus, clavatus, glaber, albus, vix longitudine staminum. *Stigma* vix crassius, rotundatum, glabrum, viride.

Feathers three to five pair, opposite, four to eight inches long. *Leaflets* six to twelve pair, obliquely oval, pointed, entire, smooth, about an inch and a half long.

Petiole common, round, smooth, about twelve inches long. *Glands:* there is a large oval one near its base; the rest are uncertain.

Panicles terminal and axillary; those that terminate the branchlets are very large; all are composed of ramifications of infinite numbers of pedicel'd, globular heads, of yellow, fragrant, corollets.

Stamens as in Mimosa odoratissima.

Legume straight, pointed, smooth, about six or seven inches long, and one broad.

Seeds eight to twelve.

This is a very large tree, and by far the largest species of Mimosa that I know; it is a native of the mountainous parts of the Coast.

The wood is not much esteemed by the natives at Samulcottah.

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122. MIMOSA AMARA.

Nelly-renga of the Telingas.

Trunk irregular. *Bark* pretty smooth, greenish; young shoots covered with soft yellow down.

Leaves twice-feather'd, about six inches long. *Feathers* opposite, from six to sixteen pair, from one to two inches long. *Leaflets* from twelve to thirty pair, linear-oblong, minute, downy.

Petiole, common and partial, downy.

Stipules lanced, acute.

Peduncles axillary, several, one or two inches long; each supports a single globular head of fragrant yellow corollets.

Filaments numerous, united below.

Legume as in Mimosa odoratissima, only a little smaller, containing five to eight seeds, lodged in the middle.

It is also a tree, and a native of the mountains.

The bark is bitter, as well as astringent.

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123. FICUS GLOMERATA.

Bruma Mamady of the Telingas.

Trunk seldom straight, but thick and high.

Branches thin. *Bark* scabrous, of a rusty-greenish colour.

Leaves alternate, petioled, oblong, or broad-lanced, tapering equally towards each end, entire, very slightly three-nerved, smooth on both sides: the under side is paler, and covered with most minute, green dots; four to six inches long, and about two, or two and a half broad.

Petiole channel'd, one or two inches long.

Racemes compound, or panicled, issue immediately from the trunk, or large branches; ramifications spreading, and jointed.

Bractes several, surrounding the joints, two-fruited; at least there are always the germs of two, but both rarely come to maturity.

Fruit pedicel'd, nearly as large as common figs, clothed with much soft down; when ripe, of a rich orange-colour.

Umbilicus closed with innumerable scales.

Calyx of the fruit small, three-leaved.

It is a large tree, generally found in and about villages, and on the banks of rivers and water-courses, where the soil is rich and moist.

The fruit is eaten by the natives. I have tasted it; but, to me, it is disagreeable. This species yields much milky juice.

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124. FICUS OPPOSITIFOLIA.

Boda Mamady of the Telingas.

Trunk erect, seldom so thick as a man's body. *Bark* scabrous, ash-colour'd.

Branches opposite, sub-erect; young shoots scabrous, and covered with much short, white hair, piped, and interrupted at the insertion of the leaves, as in the Bamboo.

Leaves opposite, short, round, petioled, oblong, slightly saw'd, of a firm, scabrous texture, shining above, below downy, and most beautifully reticulated; one of each pair is always considerably smaller than the other; they are from five to nine inches long.

Fruit, on the young shoots, axillary and peduncled; on the naked woody branches, racem'd; round, about the size of a large nutmeg, covered with much short, white hair; several equidistant ridges run from the navel to the base.

Raceme, Bractes, &c. as in Ficus glomerata, only here the raceme is simple.

Calyx of the fruit, three-leaved.

Male Flowers (*a*), a few round the inside of the mouth of the navel.

Filaments or *Peduncle* single, with a proper three-parted perianth surrounding its middle.

Female Flowers (*b*), numerous.

Peduncle long.

Perianth none.

Style and *Stigma* together, placed on the side of the germ, funnel-form.

It is only a small tree, a native of the banks of rivulets, where the soil is moist and rich. Like the Ficus glomerata, it yields, when wounded, much tenacious milky juice. The fruit is seldom eaten, and the wood, so far as I know, is not of any use.

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125. FICUS COMOSA.

Pootra Juvy of the Telingas.

It has a large spreading, very branchy, shady, top; the *bark* is pretty smooth, and ash-colour'd; the *branchlets* very slender, much subdivided, and often pendulous.

Leaves alternate, petioled, oval, obliquely pointed, entire, firm, smooth, and shining; from two to four inches long.

Petiole very slender, about an inch long, groov'd.

Fruit terminal, or in the exterior axills, pair'd, sessile, size of a gooseberry· apex depressed, with the navel rising a little in the centre, which is shut up with the scales, contracted at the base something like the neck of a bottle, smooth; when ripe, of a rich deep-yellow colour.

Calyx of the fruit, three-leaved. *Proper perianth* of both male and female florets (there are no hermaphrodite that I could find), three-leaved. *Leaflets* lanc'd.
Filaments single.
Anthers two-lob'd.
Style long, slender.
Stigma filiform, two-cleft.

I observed, that a hood over the rudiments of the young filament, fell off as soon as they increased in size.

This is a pretty large tree; a native of the Circar mountains.

126. AMOMUM ROSEUM.

Bumacatchicay of the Telingas.

Roots perennial, horizontal, jointed and white, with many large fibres.
Stems several, if they can be so called, for they are only composed of the sheaths of the leaves, involved in but few large, long sheaths, about two or three feet high, leaves included.
Leaves somewhat petioled, two-fac'd, lanced, acute, bending to one side, smooth, finely veined, about twelve inches long, and three or four broad.
Spike remote from the leafy stems, just appearing above the ground; when in flower, imbricated with lax-lanc'd, reddish, one-flower'd bractes.
Flowers; colour, a mixture of red and yellow.
Bractes: besides the exterior one, already mentioned, there is an interior one, which stands within between the flower and the rachis; it is linear, with an obtuse notch'd apex.
Calyx one-leav'd, tubular, above, membranous: mouth tooth'd.
Corol one-petal'd, irregular. *Tube* cylindric, erect, considerably longer than the bractes. *Border* double: *exterior* three-parted, the two approximated divisions are above; they are linear, pointed, and recurve, sometimes revolute; the lower division stands single, and is like the superior two, linear and revolute; all are of a bright red colour. *Interior* single, broad, obtuse, reflected over the superior two divisions of the exterior border.
Filament opposite to the inner border of the corol, and projecting curved out over it; above the anthers it ends in a long, projecting, acute, recurved horn.
Anthers two, near the base of the filament, separated by the groove for the style.
Style rather longer than the horn of the filament; its base is embraced by two awl'd bodies. (Nectary?)
Stigma perforated and ciliated.

A native of moist vallies. Flowering time, the rainy season.

127. JUSTICIA ACAULIS.

Linn. suppl. 84.

Nella-meera of the Telingas.

Roots perennial.
Stem none.
Leaves radical, spread close on the ground, sessile, wedge-form, or oblong, crenulated, rugose, nervy, woolly on the under side; from six to twelve inches long.
Spikes several, as long (or longer) as the leaves, ascending, imbricated from top to bottom, with small, rigid, pointed bractes; the superior bractes embrace each a flower, and two small lateral bractes.
Flowers small, white.
Calyx five-leaved, the superior leaflet by much the largest.
Corol: tube cylindric, recurved; upper lip vaulted; under, broad, three-parted: divisions two-parted.
Capsule conical, eight-seeded.
Seeds kidney-form.

Grows on pasture ground, generally under the shade of trees. Flowering time, the wet and cold seasons.

128. GRATIOLA HYSSOPIOIDES.

Linn. mant. 174.

129. GRATIOLA JUNCEA.

Stem erect, almost simple, round, jointed, smooth; from six to twelve inches high.
Leaves opposite, stem-clasping, lanced, obtuse, entire. *Floral-leaves* minute, triangular.
Peduncles axillary, solitary, one-flower'd.
Flowers rose-colour, small.
Anthers twin, but do not unite.
Sterile filaments in this species stand between the fertile, and are very small.
Capsule globular.

Like the former, delights in a wet situation. Appears and flowers during the rains.

130. HIPPOCRATEA INDICA.

Linn. spec. plant. edit. Willdenow, 1. *p.* 193.

Tendrils simple, woody.
Leaves opposite, short-petioled, oval, saw'd, smooth, shining; about two inches long.
Panicles axillary, opposite, peduncled, about as long as the leaves, two-fork'd.
Flowers exceeding numerous, very small, of a rusty-yellow colour.
Bractes minute.
Petals linear-oblong.
Germ three-lob'd.
Style shorter than the stamens.
Capsules from one to three, oblong, one-cell'd, one-valved.
Seeds two, broad-wing'd, affixed to the bottom of the capsule by the apex of the wing.

A large twining shrub; a native of forests, hills, and wild uninhabited places. Flowers about the beginning of the hot season.

131. POMMEREULLA CORNUCOPIÆ.

Linn. suppl. 105.

Spike compound, one-rank'd: *Spikelets* two-rank'd; each has an involucre of two lanceolate, acute, membranous valves: within these two valves is a short, club'd, downy pedicel, supporting the spikelet of four flowers with their common calyx; it is joined to the involucre by an articulation, and drops off most readily, particularly when dry, leaving the involucre attached to the rachis.
Germ inverse-hearted. *Styles* two, with feathery, recurved stigmas.

Grows under bushes, on dry uncultivated grounds.

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132. ROTTBOELLIA SETACEA.

Nardus indica. *Linn. suppl.* 105.

Culms many, erect, ramous, filiform, smooth, from two to six inches high.
Leaves, inside a little hairy, in size proportioned to that of the plants.
Spike terminal, solitary, awl'd, one-rank'd, about an inch, or an inch and a half long. *Rachis* excavated on one side, but not jointed.
Flowers all hermaphrodite, imbricate on the excavated side of the rachis.
Calyx one-flower'd, two-valved: *Valvelets* equal, membrane-margin'd.
Corol two-valved, membranous, hairy.
Stamens three.
Styles two.

Grows on old walls.

ROTTBOELLIA THOMÆA.

Linn. spec. plant. edit. Willdenow, 1. *p.* 464.
Rottboellia pilosa. *Linn. spec. plant. edit. Willdenow*, 1. *p.* 465.
Nardus Thomæa. *Linn. suppl.* 105.

Culms minute, erect, compress'd, about an inch high without the spike, and two within it.
Leaves two-faced, numerous.
Spike terminal, solitary, erect, awl'd, two-rank'd, compress'd. *Rachis* waved, excavated on the sides, not articulated. (*a* is a portion magnified, with the flowers of one side in their places.)
Flowers all hermaphrodite, disposed alternately in the excavations of the rachis (*b*).
Calyx one-flower'd, two-valved: exterior valvelet rigid, linear; interior boat-shape, and less rigid.
Corol two-valved, membranous, hairy.
Stamen three.
Styles two.*

Grows with the last on old walls.

* Description by Dr. Koenig.

Culmi foliosi, geniculis duobus, raro pluribus, vix pollicares.
Folia alterna, patentia, angusta, pilis raris longis ciliata: membrana oris vaginarum erecta, lacero-ciliata.
Spica subulata, compresso-plana. *Rachis* albicans, utrinque nervis duobus prominulis, flexuosis, viridibus.
Flores marginibus racheos immersi.
Calyx bivalvis: valvula exterior lanceolata, acuta, glabra, striata, marginata, concava, viridis; interior ovata, obtusa, alba, exteriori multo brevior.
Corolla bivalvis, basi pilis raris flore parum brevioribus albis vestita: valvulæ ovatæ, acutiusculæ, albæ, subæquales.
Stamina duo vel tria. *Antheræ* utrinque apice bifidæ, albæ.
Styli duo. *Stigmata* barbata, purpurea.
Semen globosum, glabrum, magnum.

133. AMMANNIA OCTANDRA.

Linn. suppl. 127.

Root fibrous.
Stem upright, four-sided, smooth, from one to three feet high.
Branches numerous, cross-armed, stem-like.
Leaves opposite, sessile, linear-arrow'd, smooth, margins a little revolute; from one to two inches long, and about a quarter of an inch broad.
Peduncle axillary, very short, from two to three-flower'd.
Flowers small, of a beautiful bright red colour.
Bractes minute.
Filaments as long as the corol. *Anthers* incumbent.

An annual; a native of moist places; appears during the rainy and cold seasons.

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134. GARDENIA LATIFOLIA.

Ait. hort. Kew. 1. *p.* 294. *Linn. spec. plant. edit. Willdenow*, 1. *p.* 1226.

Caaringua of the Telingas.

A small tree, with suberect *Branches*, covered with a smooth ash-colour'd *Bark*.
Leaves either opposite or three-fold, (in a good soil always three-fold) nearly sessile, inserted into the stipules, obovate, entire, a little bubbled; above of a deep shining green, below whitish; veins many and large, running parallel, from six to twelve inches long; in their axils hollow glands, with hairy margins.
Stipules annular, within the leaves, splitting irregularly when old.
Flowers one, two, three, or four, at the extremities of the branchlets; very large, and fragrant; when first open in the morning, white; but gradually grow yellow towards night.
Peduncle short, one-flower'd.
Calyx small, irregularly divided.
Corol: tube long, cylindric; throat smooth; border large, spreading, from seven to eleven-cleft: divisions obliquely oblong, the length of the tube.
Filaments none. *Anthers* corresponding with the number of segments in the border of the corol, linear, pointed at both ends, half immersed in the tube, the other half above its mouth.
Berry, size of a pullet's egg; colour at all times a cineraceous greenish-yellow; a little scabrous; generally one-cell'd, or the partitions are so trifling as hardly to be observed.
Seeds very numerous.

Is a native of barren, rocky hills, both in the Circars and Carnatic. Like the other species, it flowers about the beginning of the hot season.

This species is deserving of notice. Its large glossy green leaves, as well as the size and beauty of its flowers, rendering it very ornamental.

135. GARDENIA ULIGINOSA.

Retz. obs. 2. *p.* 14. *Linn. spec. plant. edit. Willdenow,* 1. *p.* 1228.

Nella Cakisha of the Telingas.

Trunk ill defined, covered with a dark rust-colour'd, scabrous bark.
Branches erect, rigid, four-corner'd, thick set with short, rigid, round, diverging, decussated branchlets.
Thorns one, two, three, or four, at the extremities of the short round branchlets.
Leaves opposite on young shoots, or fascicled at the extremities of the branchlets, short-petiol'd, oblong, smooth, shining, entire, two or three inches long by one and a half broad.
Stipules within the leaves, as in the rest of the genus.
Flowers one, two, or three, upon their proper short peduncles at the extremities of the branchlets, large, white, and fragrant.
Calyx above, tubular, obtusely five-tooth'd, permanent.
Corol: mouth of the tube shut up with much white hair; border flat, from five to eight-cleft: divisions orbicular.

It is a very rigid, ramous, small tree, armed with numerous strong thorns; delights in moist places, such as the banks of rivers and low lands. Flowering time the beginning of the hot season, or, in some measure, all the year.

The flowers of this species, as well as the beauty of the entire shrub, render it deserving of a conspicuous place in the flower garden.

136. GARDENIA DUMETORUM.

Retz. obs. 2. *p.* 14. *Ait. hort. Kew.* 1. *p.* 295. *Linn. spec. plant. edit. Willdenow,* 1. *p.* 1229.

Gardenia spinosa. *Linn. suppl.* 164.
Manga of the Telingas.

One of the most common, thorny, ramous, shrubs on the Coast; there being few uncultivated spots where it is not to be found.

Flowering time, the beginning of the wet season.

It is employed for fences, and also for firewood. The flowers are few in number, but, like all of this genus, highly fragrant.

The fruit, when ripe, resembles a small yellow apple; when bruised and thrown into tanks where there are fish, the fish are soon intoxicated, and seen floating on the surface. If this is practised during the hot season, it is said the fish generally die; but if in the cold season, they recover. Fishermen sometimes follow this mode of catching fish, which are not on that account deemed less wholesome. Cocculus indicus is not used in these parts for catching fish.

137. GARDENIA FRAGRANS.

Pedally of the Telingas.

Leaves opposite on the young shoots, fascicled on the old; short-petiol'd, oblong, on both sides smooth and glossy, from two to three inches long, and one, or one and a half inch broad; hollow glands in the axils of the large nerves, with hairy borders.
Stipules connecting the petioles, acute.
Umbels simple, small, terminal, or from small tubercles on the branchlets, bearing many small, white, fragrant flowers.
Peduncles very short.
Bracte small, acute, at the base of each pedicel.
Calyx above, five-tooth'd: toothlets acute.
Corol: throat hairy; border always five-cleft: divisions acute.
Berry, size of a small cherry, red, two-cell'd.
Seeds from eight to twelve, kidney-shape, orange-colour'd.

Like Gardenia spinosa, it is a common, rigid, shrubby species, delighting in a poor soil, and armed with strong, sharp thorns; but when brought into a good soil, the thorns almost totally disappear. Flowers about the beginning of the rains, in June and July.

I know of no use this species is applied to, unless for making fences, for which it is well adapted; especially when the produce of a poor barren soil, being then well armed with strong thorns. The flowers, like those of the other species, delightfully fragrant.

138. ANTHERICUM TUBEROSUM.

Cushellie of the Telingas.

Roots: many, fleshy, round fibres, each ending in a small oblong knob. They are perennial.
Leaves radical, many, sword-form; margins waved, smooth; from one to two feet long, and from two to four inches broad.
Scape round, smooth, naked, from one to three feet long.
Panicle oblong, erect.
Flowers numerous, sub-erect, pure-white, about the size, and in appearance like the snow-drop.
Filaments equal, simple, short, ascending. *Anthers* linear, erect.
Style ascending, projects rather beyond the anthers. *Stigma* lopp'd.
Capsule three-sided.

Is a native of the moist vallies among the Circar mountains. Flowering time the rainy season.

139. LORANTHUS BICOLOR.

Yellinga-wadinika of the Telingas (Wadinika means parasitical).

Trunk scarcely any.
Branches numerous, ascending, woody. *Bark* grey.
Leaves nearly opposite, sessile, or very short petioled; below oval, oblong, or lanced; above linear-lanced, waved, entire, reclin'd, veins scarcely any; from three to five inches long, and from a half to one and a half broad.
Racemes axillary, single, simple, erect, many-flower'd.
Flowers in size and appearance, very like those of honey-suckle.
Bract small, concave, hearted; presses on the base of the germs on one side. There is no other perianth of the fruit than the above-mentioned bract; that of the flower cup-form, entire, permanent.
Corol one petal'd: tube long, a little curved, swelling from the bottom to within a third of the mouth, then contracts a little; border five-parted, upper fissure much the deepest: segments linear, reflected.

Filaments five, from the base of the segments of the corol, short. *Anthers* linear.

Germ beneath, naked. *Style* length of the corol. *Stigma* headed.

Berry below, crown'd with the remaining calyx, oblong, smooth, pulpy, one-cell'd.

Seed single.

This is found growing upon the branches of various trees; is very ramous; flowers during the greatest part of the year.

It is a handsome parasite, bearing a great number of very beautiful flowers; its foliage also is beautiful. The upper part of the branch of the tree, on which it grows, soon perishes.

140. LORANTHUS SCURRULA.

Linn. spec. plant. 472.

The natives have no other name for this, than Wadinika.

Leaves opposite, petioled, hearted, scollop'd, below covered with soft white down; about two inches long, and one and a half broad.

Peduncles numerous, collected in the axills, one-or more-flower'd.

Flowers considerably smaller than in the last, of a rusty-grey colour, and covered with grey, farinaceous dust.

Bracte pressing on the germ, as in the last.

Calyx of the fruit, no other than the bracte of the flower, as in the former.

Corol one-petal'd: tube swell'd most towards the base; border four-parted, upper fissure deepest: divisions linear, reflected.

Stamens and *Pistil* as in the last.

Berry top-shape, one-seeded.

It is also a parasitical shrub, but smaller considerably than the last, and much scarcer; grows in the same manner. Flowers during the wet season.

141. FERONIA ELEPHANTUM.

Corrêa in Act. Soc. Linn. 5. *p.* 224.

Elephant-or Wood-apple Tree of the English.
Balong of the native Portuguese.
Yellanga of the Telingas.
Vellangay of the Tamuls.

Trunk erect, grows to a pretty large tree. *Bark* deeply crack'd and split in various directions, dark, dirty colour.

Branches few, irregular, forming a scanty ill-looking top.

Thorns axillary, single, erect, very strong and sharp; sometimes (though rarely) they are wanting on many of the branches.

Leaves on the young shoots alternate; on the last, or two years branchlets, two, three, four, or more come out together from the old axills, or about the thorns; feather'd with an odd one; from three to five inches long. *Leaflets* opposite, two or three pair, nearly equal, oblong, often slightly notch'd, emarginated, firm, smooth, shining deep green, about an inch and a half long, and three quarters broad. *Petiole* articulated, and somewhat wing'd.

Stipules none.

Panicles small, terminal, axillary, either from where the leaves stood, or from the axills of the thorns, frequently leaf-bearing.

Flowers tinged with red, hermaphrodite and male mixed.

HERMAPHRODITE FLOWERS.

Calyx small, five-tooth'd, below.

Petals five, oblong, spreading, many times larger than the calyx.

Filaments ten, short, awl'd, equal, hairy on the inside near the base. *Anthers* erect, before they burst, very large, and tinged red; afterwards they become small and yellow.

Germ above, oblong, sessile; in the male or barren flowers, which are most numerous, very minute, and globular. *Style* short, thick; in the male flowers scarcely any. *Stigma* small, headed, somewhat five-lobed.

Berry globular, about the size of a large apple, covered with a hard, grey, scabrous, woody shell, one-cell'd.

Receptacles five, longitudinal, wedge-form, with their sharp edges projecting inwards, which gives a stellated appearance to the transverse section of the fruit.

Seeds many.

MALE FLOWERS like the hermaphrodite, but here the pistil is small and sterile.*

This grows wild in most woods and mountainous parts in India. Flowers during the cold and hot seasons. Fruit ripe during the hot and rainy seasons.

From wounds made in the bark of this tree exudes a most beautiful transparent gum, which Mr. Smart, the miniature painter, told me exceeded every thing he had ever seen for mixing with his colours.

The wood is white, hard and durable, but, when exposed to the sun, it soon splits.

The fruit is universally eaten on this coast; I mean the pulpy part, in which the seeds lie immersed.

142. BERGIA AQUATICA.

Bergia capensis. *Linn. Mant.* 241.
Pola-tsjira. *Rheed. Malab.* 9. *p.* 153. *t.* 78.
Neeroo Pavala of the Telingas.

Stem creeping, with extremities and branchlets erect, round, smooth, jointed; length, as in all water plants, very various.

Leaves opposite, sessile, lanced, saw'd, smooth, shining, about an inch and a half long.

Flowers axillary, very numerous, as if verticill'd.

Peduncle one-flower'd, short.

* Description by Dr. Koenig.

Folia pinnata: *pinnæ* extimæ majores.

Corymbi axillares. *Pedunculi* filiformes, glabri, articulati, flore vix longiores. *Bracteæ* duæ, oppositæ, minimæ.

Calyx monophyllus, parvus, glaber, caducus, quinquedentatus: denticuli subæquales, rubri, subcallosi.

Petala quinque, oblonga, acuta, plana, subcarnosa, albicantia, extus glandulis minimis rarioribus adspersi.

Filamenta plerumque decem, interdum plura vel pauciora, basi villis marginalibus invicem arcte cohærentia, cætera glabra. *Antheræ* oblongæ, filamentis longiores, croceæ.

Germen superum, ovatum, glabrum. *Stylus* conicus, crassus, glaber. *Stigma* simplex, in junioribus, sulcis quatuor decurrentibus notatum.

Bacca ovalis, tecta cortice crasso cinereo albicanti, unilocularis, polysperma, magnitudine pomi granati.

Calyx five-parted to the base: divisions lanced, permanent.
Petals five, lanced, spreading, larger than the calyx, withering.
Stamens ten, spreading, length of the calyx.
Capsule nearly globular, five-lob'd, five-cell'd, five-valved.
Seeds numerous, affixed to a large cylindric, common receptacle, in the centre.

A succulent, spongy, herbaceous, annual plant, growing in wet places, or floating on sweet water.

143. ÆGLE MARMELOS.

Corrêa in Act. Soc. Linn. 5. *p.* 222.

Crateva Marmelos. *Linn. spec. plant.* 637.
Maredoo of the Telingas.

Trunk pretty erect. *Bark* ash-colour'd.
Branches thin and irregular.
Thorns axillary, in pairs, single, very sharp and strong; but sometimes wanting.
Leaves three'd. *Leaflets* oblong, or broad-lanced, attenuated to a blunt point, crenulated, differing much in size; but the exterior one is always the largest.
Panicles as in Feronia, but the flowers are much larger and white; all are hermaphrodite, at least I have not found any other.
Calyx and *Corol* as in Feronia.
Filaments about forty, short. *Anthers* linear, erect.
Pistil as in Feronia.
Berry considerably larger than in Feronia, smoother, shell much harder, from ten to fifteen-cell'd; cells contain, besides the seeds, a large quantity of an exceedingly tenacious transparent gluten, which on drying becomes very hard, but continues transparent; when fresh it may be drawn out into threads of one or two yards in length, and so fine as to be scarcely perceptible to the naked eye. *Seeds* from six to ten in each cell, oblong, a little compress'd, woolly.*

This grows to a pretty large tree. It is a native of the mountainous parts of the Coast, but met with sometimes also in the low lands. Flowers during the hot season.

From the rind of the fruit, the Dutch, on the island of Ceylon, prepare a perfume.

The wood is of a light chocolate colour, much variegated with darker coloured veins; is hard, durable, and used for a variety of purposes.

The fruit, delicious to the taste, and exquisitely fragrant, is not only nutritious, but possesses a laxative and aperient quality, confirmed by experience, which renders it particularly serviceable in habitual costiveness. The mucus of the seed makes a very good cement for some purposes.

* Description by Dr. Koenig.

Calyx monophyllus, campanulatus, quinquepartitus: laciniæ rotundatæ, coriaceæ, glabræ, ciliatæ, corolla multo breviores.
Petala oblonga, acuta, patentia, extus punctata, viridia; intus albicantia, staminibus longiora.
Filamenta 32 ad 36, receptaculo germini adproximato adnata, basi interdum in phalanges coalita, compressiuscula, glabra, alba. *Antheræ* lineares, acutæ.
Germen superum, oblongum, glabrum. *Stylus* crassus, brevis. *Stigma* ovale, sulcis plurimis obsolete notatum, magnum, virens.
Bacca globosa, utrinque parum depressa, cortice interiori duro, in loculamenta 12 ad 16, intra pulpam luteam, divisa. *Semina* plurima, ovata, compressiuscula, villosa, cinereo-albicantia.

144. BIGNONIA SPATHACEA.

Linn. suppl. 283.

Woady of the Telingas.

Trunk, as also the branches, very irregular both in size and shape. *Bark* light-ash-colour'd; young shoots covered with whitish down.
Leaves opposite, feather'd with an odd one, about six inches long. *Leaflets* opposite, from two to three pair, nearly orbicular, intire, downy: from one to two inches long, and about as broad.
Raceme terminal, erect, as long as the leaves, few-flower'd.
Flowers white, pretty large.
Calyx, a spath, two-thirds open on the convex side.
Tube of the *Corol* longer than the calyx, cylindric; border flat: divisions equal, oblong.
Nectary, a dark-purple, fleshy ring surrounds the base of the germ.
Stamens: there is a fifth sterile filament. *Anthers* oval.
Stigma two-lobed.
Silique linear, about a foot long, pendulous, twisted in various forms.

This is a small, ill-looking, thin tree, a native of most of the forests over the Coast; flowers during the hot season.

145. BIGNONIA QUADRILOCULARIS.

Trunk straight, and of considerable height. *Bark* grey, with a few scabrous spots.
Branches numerous, spreading, forming a large shady head.
Leaves about the extremities of the branchlets, generally three-fold, feather'd with an odd one, from twelve to twenty-four inches long. *Leaflets* from four to five pair, opposite, oblong, saw'd, acute, smooth.
Panicle terminal, erect, large, dense, many-flower'd, very downy.
Flowers large, rose-colour'd, delightfully fragrant.
Calyx generally two-parted, with the upper lip two-cleft, very downy.
Corol: border five-parted: divisions equal, with their margins elegantly waved.
Stamens: here is also a fifth sterile filament. *Anthers* double.
Nectary as in Bignonia spathacea.
Stigma two-cleft.
Silique erect, straight, linear, pointed, pretty smooth; twelve inches long, two broad, and half an inch thick, four-cell'd, two-valved; the dissepimentum is enlarged in the middle of each side, with a sharp ridge, which touches the sides of the valves, dividing each of the usual cells into two; into these ridges the seeds are affixed.

This is a large tree, a native of the Circar mountains; flowers during the beginning of the hot season.

The wood is employed for many purposes by the natives.

146. STREPTIUM ASPERUM.

Obeera of the Telingas.

Stem woody, perennial, short, irregular.
Branches opposite, exactly four-sided, rough. The height of the whole plant is from two to four feet.
Leaves opposite, petioled, hearted, saw'd, covered with stiff-hook'd hairs, from one to three inches long, and from one to two broad.
Petiole channel'd, rough.
Raceme terminal, or in the cleft of the exterior branchlets, erect, very long, rachis four-sided, rough.
Bractes solitary, one-flower'd.
Flowers, towards the bottom of the raceme, remote; above approximated, small, white.
Perianth one-leaved, oblong, bellied, five-angled, five-groov'd, five-tooth'd, covered with stiff, white hairs, permanent, closing, and enlarging with the fruit, which it entirely covers.
Corol one-petal'd: tube cylindric, rather longer than the calyx, twisted near the apex, a little curved; border five-parted: divisions inverse-egg'd, equal.
Filaments four, in the upper bent part of the tube: two longer, and two shorter. *Anthers* round, two-lobed, approach by pairs.
Germ above, four-lobed. *Style* length of the tube. *Stigma* large, two-lipp'd: the upper very short, the under long, broad, recurv'd.
Drupe dry, two-lobed, hid in the withered, inflated, closed calyx, nut-like, laterally hedge-hog'd: each lobe two-partible.
Seeds, one in each division of the nut, oblong, tapering towards each end, a little bent.

I have only found it in the vicinity of Samulcottah on the terraces of old walls of pagodas; flowers during the wet and cold seasons. While young it is a fair looking plant.

I have not found it put to any use.

147. TETRANTHERA APETALA.*

Narra Alaghy of the Telingas.

Leaves scatter'd near the extremities of the branchlets, petioled, oval, obtuse, smooth, above shining, from three to five inches long, and from two to three broad. *Petiole* three quarters of an inch long, round, smooth.
Stipules none.
Peduncle solitary, axillary, length of the petiole, three-or four-cleft. *Pedicels* rather shorter than the peduncles, clubb'd, each supporting a small head, or umbellet of minute florets.
Bracte, a small one at the insertion of each pedicel.

MALE TREE.

Involucre four-leaved, containing from eight to twelve pedicel'd florets: leaves orbicular, concave, falling. *Perianth* none.
Corol none.
Filaments from ten to sixteen, hairy, erect, united near the base with the pedicels of the nectarial glands into a tube.
Anthers four-lobed, four-cell'd, with an oval lid to each cell.

* Differs from Tetranthera laurifolia, *Jacqu. hort. Schoenbrunn.* 1. *p.* 59. *tab.* 113. in having no petals.

Nectarial glands from six to sixteen, short-pedicel'd, oval, targeted, alternate with the filaments, but three times shorter.
Pistil none.

FEMALE TREE.

Umbellets and *Involucre* as in the male.
Corol none.
Hairy filaments as in the male, but instead of anthers are oblong white glands.
Nectarial glands as in the male.
Germ above, globular. *Style* twice the length of the filaments. *Stigma* torn.
Berry globular, smooth, black when ripe, almost dry, one-cell'd, size of a pea, resting on the club'd pedicel, as on a cup, like the acorn.
Seed one, globular.

This grows to a middle sized tree; a native of the mountainous parts of the Circars. Flowers in June.

148. TETRANTHERA MONOPETALA.

Narra Mamady of the Telingas.

Trunk erect. *Bark* dark-greenish, rust colour, smooth.
Leaves alternate, short-petioled, oblong, entire, above pretty smooth, below somewhat downy, from four to six inches long, and from two to three broad.
Peduncles axillary, numerous, short, undivided.
Bracte, a small rusty-colour'd, downy one, at the insertion of each peduncle.

MALE TREE.

Involucre five-leaved, containing six pedicel'd florets; leaves oval, concave, falling. *Pedicels* clubb'd, woolly. *Perianth* none.
Corol one-petal'd, funnel-form: tube short, hairy; border five-cleft: divisions oblong, downy.
Filaments from eight to ten, longer than the corol, inserted into the mouth of the tube, alternately with the nectarial glands.
Nectarial glands as in the former.
Pistil: the rudiment of one only.

FEMALE TREE.

Involucre, *Corol*, and *Nectarial glands*, as in the male.
Filaments minute, number very uncertain, and without anthers.
Berry and *Seed* as in the former.

This is also a middle sized tree; a native of vallies. Flowering time the hot season.

The bark of this species is used, by the hill people, in substance, for the cure of diarrhœas; its taste is mildly astringent, with a considerable degree of a balsamic sweetness.

Wood white, pretty hard.

149. MIMOSA ARABICA.

Lamarck encyclop. 1. *p.* 19.

Nella (or black) Tooma of the Telingas.

Trunk in general crooked; *Bark* scabrous, and cracked; is outwardly of a dark rust-colour.

Branches numerous, stand in every direction, yet it gives but a scanty shade; owing to the smallness of the leaves.

Thorns stipulary, spreading, long, sharp, white.

Leaves twice-feather'd, from two to three inches long. *Feathers* from four to six pair, opposite, about an inch long. *Leaflets* from ten to twenty pair, linear-oblong, minute, smooth.

Glands uncertain, except between the lower pair of feathers, where there is always a large one.

Peduncles axillary, several, jointed and bracted above the middle, about an inch long, each ending in a globular head of fragrant yellow corollets.

Filaments numerous, distinct, inserted round the germ.

Legume pendulous, from six to ten inches long, compress'd, pointed, necklace-form, but not articulated, covered with soft white down. *Receptacle* chaffy. *Chaff* wedge-form.

Seeds from ten to fifteen.

This is the most useful, and at the same time the most common species; it grows to a pretty large tree, and abundantly over every part of India. A low, stiff, uncultivated soil is what suits it best. Is in flower most part of the year.

Besides yielding the greatest quantity of gum arabic, the wood is one of the most useful in India; being of a light brownish colour, strong, tough, and durable; the best knees and crooked timber in ship building, are made of it. It is also esteemed for wheel carriages, and many other purposes.

The exterior bark is of a dark, blackish colour, cracked in various directions, and inert; but the interior is fibrous, pretty thick, of a reddish colour, and a most powerful simple astringent. It is employed to tan leather, and to dye various shades of brown, with salt of steel. A strong decoction makes pretty good ink.

The unripe legumes possess still more astringency, and make excellent ink with salt of steel.

Lime water added to an infusion of the bark deepens the colour, and causes a copious precipitation of brown feculæ.

Spirits acquire from it a deep, clear, brown colour, which bears mixing with water, without decomposition, but it possesses less astringency than the infusion in water.

The flowers communicate to water a bright yellow, which alkalies deepen, and acids lower.

The gum might be collected in large quantities at an easy rate, and would find employment for poor people during the dry season; a period, when there is little or no work for them. The natives mix it with the cake of the seeds of Sesamum (Gingely) left after the oil is expressed, which they use as an article of diet. It is also much in use amongst the dyers, chintz painters, &c.

Cattle are very fond of the green legumes and tender tops of the branches.

The natives sometimes substitute a decoction of the bark for that of soap nuts, or of the pods of Mimosa saponaria, to wash their heads with.

150. MIMOSA LEUCOPHLOEA.

Tella (or white) Tooma of the Telingas.

Thorns in pairs as in the last; colour of a rusty iron, very sharp.

Leaves twice-feather'd, from three to four inches long. *Feathers* from eight to twelve pair, opposite, about an inch long. *Leaflets* from twenty to thirty pair, minute, linear-oblong.

Glands: one between the lower and exterior, one or two pair of feathers.

Panicles large, terminal, composed of sub-erect racemes of short pedicel'd, small, globular, heads, of pale yellow, fragrant corollets.

Peduncles and *Pedicels* downy.

Bractes small, oval.

Filaments numerous, distinct.

Legume linear, compress'd, generally curved in form of a sickle, obtuse, smooth, from four to six inches long, and half an inch broad.

Seeds from twelve to twenty.

A better looking tree than the last; it grows fully as large, or larger, with a straighter trunk, and sub-erect or spreading branches: the bark is of a whitish colour and smooth. It is a native of dry mountainous countries. Flowering time the wet season.

The wood of this species is less useful than that of the last; but the bark is very astringent, and the natives distil an ardent spirit from it. The process is as follows: the fresh bark is cut into small pieces, or bruised, and with a little coarse sugar, and toddy (palm juice) put into vessels with water to ferment; when the fermentation is at a proper height, which practice alone can teach, the liquor is committed to the still, and a certain quantity of spirit drawn off.

151. CURCUMA MONTANA.

Roots perennial, consisting of conical tubercles, enveloped in the remaining sheaths of the leaves, with large fleshy fibres from their base.

Leaves radical, three or four, petioled: petioles from eight to twelve inches long, enveloped in a few sheaths, forming something like a stem; leaves oval, pointed, beautifully veined, smooth, from eight to twelve inches long, and from five to six broad.

Spike rises from the centre of the petioles; the peduncle is of their length, and involved in its proper sheaths.

Bractes numerous, below roundish, above oblong: the lower half of the back of the inner two are united to the margins of the next without, forming a sack, which contains from two to four flowers, each with a smaller wedge-form membranous proper bracte; the superior bractes are large, waved, rose-colour'd, and generally without flowers.

Corol: tube widening, somewhat bell'd; border double: exterior three-parted: divisions equal, entire; interior two-lip'd: upper lip erect, three-cleft; under lip entire, roundish: border waved, a little notch'd.

Filament no other than the middle segment of the upper lip of the interior border of the corol. *Anthers* two, linear, the under point of each ends in a long sharp spur.

Germ below. *Style:* its base embraced with two nectarial bodies. *Stigma* large, globular, two-lip'd.

It grows in moist places amongst the mountains; flowering time the rainy season.

Explanation of the Figures.

A. Three of the large or exterior bractes; the outer one is split from the other two, and thrown down to shew the flowers and inner bractes.

B. The germ and calyx (*a*) laid open, to shew the two bodies, which embrace the base of the style.

152. JUSTICIA REPENS.

Linn. spec. plant. edit. Willdenow, 1. *p.* 96. *(non Fl. zeyl.)*

Root perennial.
Stems many, diffuse, round, jointed, smooth, sometimes rooting at the joints; from one to two feet long.
Leaves opposite, short-petioled, broad-lanced, intire, sharp-pointed, smooth.
Spikes axillary, peduncled, erect, somewhat compressed, one-ranked.
Bractes, exterior in four rows, oval, with a broad white membranous margin; the two rows on the back of the spike are neuter, the two on the fore-part embrace the flowers; besides the calyx of each flower is embraced laterally by two smaller lanced bractes.
Flowers alternate, pale rose-colour.

Is a native of pasture ground; flowering time, the wet and cold seasons.

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153. JUSTICIA PECTINATA.

Linn. spec. plant. 22.

Stems many, diffuse, filiform, round, smooth, jointed.
Branches alternate.
Leaves opposite, short-petioled, depending, lanced, intire, smooth; the two opposite leaves are generally unequal in size.
Spikes axillary, or terminal, sessile, shorter by much than the leaves, one-rank'd; there are generally three together, and the middle one largest.
Flowers very small, bright-blue.
Bractes to each flower five, of different sizes, oval, or lanced, with beautiful white membranous margins.
Corol: upper lip intire, acute.
Anthers: the lower one of each filament has a long obtuse horn from the under end.
Capsule four-seeded, two in each cell.

This very beautiful, delicate, diffuse, herbaceous species, grows in shady places; flowering time, the cold season.

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154. GRATIOLA VERONICIFOLIA.

Linn. spec. plant. edit. Willdenow, 1. *p.* 103.

Stems several, creeping.
Branches erect, four-sided, smooth, from six to eight inches long.
Leaves opposite, sessile, decussated, oblong, glandulous, smooth, fleshy, finely, and most sharply saw'd; serratures end in a minute bristle.
Raceme terminal.
Flowers opposite, decussated, violet-colour.

Is a native of moist places; flowering time the wet and cold seasons.

155. GRATIOLA OPPOSITIFOLIA.

Linn. spec. plant. edit. Willdenow, 1. *p.* 105.

Stems several, nearly erect, ramous, four-sided, smooth.
Leaves sessile, opposite to another leaf, or a flower, linear-lanced, saw'd, smooth.
Peduncles leaf-opposed, or opposite to each other, short, horizontal, club'd.
Bractes solitary, embrace the insertion of the peduncle.
Flowers small, blue.
Anthers two pair, united. Sterile filaments small, white.
Capsule lanced, twice the length of the calyx.

A native of moist pasture ground; flowers during the wet season. Is from three to six inches high.

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156. ROTTBOELLIA COMPRESSA.

Linn. suppl. 114.

Shervoo (i. e. Lake) Panoocoo of the Telingas.

Culms several, creeping, or climbing, ramous, compress'd, from five to twenty feet long, piped, smooth, about as thick as a common quill, and very hard.
Leaves numerous, two-faced, small for the size of the plant, smooth and soft; sheaths short, compress'd and smooth.
Spikes peduncled, terminal, and from the exterior axills, generally from two to five together, compress'd a little, smooth; from two to four inches long.
Peduncles jointed at the middle, and there bracted; lanced, chaffy; bractes also surround their insertions.
Flowers all hermaphrodite, opposite decussated, lodged in the excavations of the jointed rachis.
Calyx one-flower'd, two-valved: the glumes nearly equal, cartilaginous, pointed, and somewhat longer than the excavations of the rachis; those of the other two sides have them obtuse, and the exterior one only cartilaginous.
Corol three-valved: all the valves are membranous.
Nectary: two triangular bodies embrace the base of the stamens and germ.
Stamens three.
Styles two.
Stigmas feathery.

Is found on the borders of lakes, amongst other sorts of long grass and brush wood.

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157. ROTTBOELLIA EXALTATA.

Linn. suppl. 114.

Conda Panoocoo of the Telingas.

Root consists of strong woody fibres.
Culms erect, ramous, a little compress'd, inwardly of a spongy nature, from six to ten feet high, and as thick as the little finger near the base, where they are armed with strong, short, white hairs.

Leaves large and numerous, outside smooth, inside hairy, margins hispid; sheaths very hairy: hairs elevated on glandulous points, very stiff and sharp.
Spikes terminal, and from the exterior axills, generally solitary, cylindric.
Flowers are of three sorts, hermaphrodite, male *a*, and neuter *b*; the first and second occupy the same alternate pits on one side of the spike, while the neuter stand on each side of them, so that the spike may be called halved, or one-rank'd.
Calyx of the hermaphrodite and male florets two-valv'd, &c. as in the Rottboellia compressa.
Corol also as in the R. compressa.
Calyx of the neuter flower two-valved: valvelets oblong.
Corol: glumes two, membranous.

Is a native of mountains.

158. OPILIA AMENTACEA.

Bally-coma of the Telingas.

GENERIC CHARACTER.

Calyx below, five-tooth'd. *Corol* five-petal'd. *Nectarial* bodies five, alternate with the stamens. *Style* none. *Berry* one-seeded.

DESCRIPTION.

Leaves alternate, two-faced, short-petioled, egg'd or oblong, intire, smooth, shining, sometimes very slightly saw'd, about three inches long, and one and a half broad.
Stipules none.
Raceme axillary, small, erect; before the flowers open it is every where closely imbricated with small, three-flower'd, targeted, kidney-form, pointed, ciliated, falling bractes.
Flowers small, greenish-white.
Calyx below, very small, five-tooth'd.
Petals five, spreading, oblong.
Nectary: five short, thick, fleshy, club'd bodies, alternate with the stamens.
Filaments five, spreading, shorter than the petals. *Anthers* egg'd.
Germ oblong. *Style* none. *Stigmas* single.
Berry size of a cherry, globular, juicy, one-seeded.

This is a small tree, a native of the mountainous parts of the Circars.

159. ERYCIBE PANICULATA.

GENERIC CHARACTER.

Calyx below, five-tooth'd. *Corol* one-petal'd, ten-lob'd. *Style* none. *Stigma* five-furrowed. *Berry* one-seeded.

DESCRIPTION.

Leaves alternate, short-petioled, reflected, linear-oblong, pointed, intire, smooth, from four to five inches long, and about two broad.
Panicle terminal, large, oblong, covered with rust-coloured farina.
Flowers numerous, small, rust-colour'd; border yellow. The ten divisions of the border of the corol are equal, and orbicular.
Filaments from the base of the tube of the corol, short. *Anthers* egg'd, pointed.
Style none. *Stigma* large, five-furrow'd.
Berry size of a small cherry, black, pulpy, one-seeded.

This is a very large, climbing shrub, a native of our mountain forests; young shoots are covered with much rust-coloured farina.

160. TRIOPTERIS INDICA.

Linn. spec. plant. ed. Willdenow 2. *p.* 744.

Bey-rack-tiga of the Telingas. (Tiga means a climbing or twining plant.)

Leaves opposite, petioled, egg'd, acute, waved, and sometimes a little scollop'd, intire, smooth, shining, from three to four inches long, and two broad.
Petiole channel'd, downy, three-fourths of an inch long.
Panicles terminal, and axillary, cross-armed, small, delicate; or the whole extremity of the branchlets may be called one beautiful, large, leafy, panicle.
Bractes small, rust-coloured.
Flowers very numerous, white.
Petals oblong, concave, without claws.
Stigmas headed, intire; (sometimes the three styles adhere as if one.)
Seeds three, linear-oblong, united at the seeds themselves; each surrounded by a very large membranous wing.

A large twining shrub, a native of the forests among the mountains. I know of no use any part of this plant is put to.

161. TORENIA CORDIFOLIA.

Stem erect, from six to eight inches high, four-sided.
Branches cross-armed, ascending, stem-like, purplish, a little hairy.
Leaves opposite, short-petioled, hearted, saw'd, a little hairy, one inch long, and three-quarters broad.
Flowers axillary, solitary, pedicled, large in proportion to the plant, bluish-purple.
Calyx large, bellied, five-angled, two-lip'd: upper lip slightly three-tooth'd; the under lip simply pointed, permanent.
Corol: upper lip slightly emarginated.
Nectary cup-form, surrounds the base of the germ.
Filaments simply approach arch-wise. *Anthers* double, one above the other, united by pairs.
Capsule hid in the calyx, two-cell'd, two-valv'd.

This is a small, herbaceous, rare plant, a native of the moist pasture lands about Samulcotah. Flowers during the cold season.

162. GMELINA PARVIFOLIA.

Shieri goomoodoo of the Telingas.

This comes very near to Gmelina asiatica; the chief differences are: it is always a smaller plant, with much smaller leaves, although

growing together (which is not unusual) on the same ground; its thorns are more numerous, and always present; the racemes are terminal; its leaves have the quality of thickening cold water like those of Pedalium murex and Menispermum hirsutum.

The flowers and fruit are alike in both plants.

The plant is common in every forest and uncultivated place on the coast. Flowering time October and November.

The natives employ the water impregnated with the gelatinous quality of the leaves, as a remedy for the heat of urine in gonorrhœa.

Water, stirred with the branches and leaves of the Pedalium murex, becomes in like manner mucilaginous, and is used for the same purpose, but soon, losing its consistency, returns to its original state: whereas the leaves of Gmelina parviflora, being gently bruised by the hand in stirring, the water remains mucilaginous till decomposed by fermentation.

163. STEMODIA VISCOSA.

Boda-sarum of the Telingas.

Stem herbaceous, generally bent to one side, with many spreading branches from its base, four-sided, hairy, viscous, from six to twenty-four inches high.

Leaves opposite, stem-clasping, linear, below oblong, above hearted; saw'd, hairy, viscous.

Flowers axillary, solitary, peduncled, small, violet-colour.

Bractes two, lanced, press on the calyx.

Corol: tube compress'd, longitudinally wrinkled, twice the length of the calyx; upper lip broad, emarginated; under lip three-parted.

Stamens within the tube.

This is a small annual herbaceous plant; found on dry paddy fields, after the crop has been cut.

The plant has a pleasant aromatic smell.

164. SERPICULA VERTICILLATA.

Linn. suppl. p. 416.

Poo-Natsoo of the Telingas.

It consists of simple thread-form *Roots*, and a number of fine thread-form jointed shoots, or *Stems*, some creeping, some floating below the surface of the water.

Branches solitary, axillary.

Leaves sessile, verticil'd (3-6-fold) oblong, lanced or linear-lanced, from an eighth of an inch to half an inch long.

MALE FLOWERS

axillary, sessile, from one to four in the verticill, much smaller than the female.

Spathe one-flower'd, sub-globular, murex'd, bursting irregularly.

Perianth three-leaved: leaflets inverse-egg'd, reflected.

Corol three-petal'd. Petals wedge-form, reflected.

Filaments three, short, ascending. *Anthers* very large, two-lob'd, opening with an elastic jerk. *Pollen* white, very large grain'd.

FEMALE FLOWERS

on a distinct plant, axillary, generally solitary, though sometimes there are two from the same verticill.

Germ sessile, awl'd, ending in the long sub-erect receptacle of the flower, which elevates it above the water, while expanded.

Stigmas three, lanced.

Capsule has the appearance of a siliqua; awl'd, sometimes murex'd, one-cell'd. *Seeds* 3-5, oblong, pointed at each end.

When the male flowers are ready to expand, the murex'd spathe bursts, the flowers are then quickly detached, and swim remote from the parent plant on the surface of the water in search of the female flowers, resting on the extremities of the reflected leaflets of the perianth and petals of the corol.

Grows in clear standing sweet water; flowers during the cold season.

The Barampore sugar refiners use this herb, while moist, to cover the surface of their sugars, as clay is used in the West India islands; and in two or three days the operation is finished exceedingly well.

165. VALLISNERIA OCTANDRA.

Root fibrous, annual.

Leaves radical, linear, tapering to a fine point, smooth, from nine to twelve inches long, and half an inch, or less, broad.

MALE FLOWERS.

Peduncle, or rather *Scape*, axillary, straight, a little compressed, length of the leaves, or more, so as to raise the flowers above the surface of the water.

Spathe one-leaved, sub-cylindric, somewhat diaphanous, open at the top for the unexpanded flowers to pass through.

Flowers numerous, in succession, white, pretty large, pedicel'd. Pedicels lengthen, when the flowers are ready to expand, so as to elevate them just above the mouth of the spathe.

Perianth three-leav'd: leaflets lanced.

Corol three-petal'd: petals linear, recurved, more than twice the length of the calyx.

Filaments eight, of unequal length, erect, shorter than the petals.

Anthers linear.

Germ abortive, three-sided. *Styles* three.

FEMALE FLOWERS, on a distinct plant.

Scape shorter and thicker than the male.

Spathe as in the male, one-flower'd.

Flowers white, elevated above the germ, and above the mouth of the spathe, by a very long receptacle, stile, or pedicel, which makes up for the shortness of the scape, and brings the flower nearly of a height with the tops of the leaves.

Perianth three-parted.

Corol as in the male, only the petals are here filiform.

Germ cylindric, obsoletely three-sided, sessile in the bottom of the spathes, ending in the above mentioned flower-elevating receptacle. *Style* three-cleft to near the base: divisions filiform, white.

Grows in stagnant, shallow, sweet, water.

166. STILAGO DIANDRA.

Palla-goomodoo of the Telingas.

Leaves alternate, short-petioled, nearly two-faced, oval, entire, smooth, from two to four inches long, and from one to two broad.
Stipules lanced.
Spikes thread-form, terminal, many-flower'd. *Bractes* minute, one-flower'd.
Flowers very small, approximated.

MALE TREE.

Perianth below, cup-form, obtusely four-tooth'd.
Corol none.
Filaments two, four times longer than the calyx.
Anthers twin, singly oval.

FEMALE TREE.

Calyx below, closely embracing three-fourths of the germ, four-or five-tooth'd.
Corol none.
Nectary: a yellow, fleshy ring, surrounding the base of the germ.
Germ above, obliquely egg'd. *Styles* two, spreading; one of them always two-cleft. *Stigmas* simple.
Drupe minute, succulent, one-cell'd. *Nut* one-celled, very small.

A large tree; a native of the mountainous parts of the Circars; flowers in June.

The berries, when ripe, are eaten by the natives. The wood serves for various uses.

167. ANTIDESMA PUBESCENS.

Pollarie of the Telingas.

Leaves alternate, short-petioled, two-faced, oval, entire, downy, from two to four inches long, and from one to two broad.
Stipules awl'd, downy.
Spikes numerous, terminal, and from the exterior axills, downy; those of the male tree much longer and more slender. *Bractes* lanced, one-flower'd.
Flowers very small, greenish-yellow.

MALE TREE.

Perianth five-leav'd: leaflets egg'd, hairy.
Corol none.
Filaments five, spreading, longer than the calyx. *Anthers* double.
No other rudiment of a pistil, than a tuft of wool.

FEMALE TREE.

Calyx as in the male.
Corol none.
Nectary: a yellow fleshy ring surrounding the base of the germ.
Germ above, obliquely oblong, hairy. *Styles* two, short, spreading, one two-cleft. *Stigmas* simple.
Drupe as in Stilago diandra.

This also is a large tree, a native of the same places with Stilago diandra, and flowers at the same time. They are much alike in their general habit and characters; and the berries, likewise, are eaten by the natives.

168. ROTTLERA TINCTORIA.*

Wassunta-gunda of the Telingas.

A middle sized, ramous tree, with an erect trunk.
Leaves alternate, petioled, oblong, pointed, intire, three-nerved, above pretty smooth, below downy; from four to eight inches long, and from two to four broad. *Petiole* round, downy, from one to three inches long. *Glands* two brown, on the upper side of the base of the leaf.
Racemes axillary and terminal, those of the axills single and simple; the terminal compound, panicle-like.
Flowers scatter'd, single, small.

MALE TREE.

Calyx twice two-cleft: leaflets egg'd, reflected.
Corol none.
Filaments between thirty and forty, inserted into the undivided base of the calyx. *Anthers* linear, fork'd at each end.

FEMALE TREE.

Calyx below, three-four-or five-tooth'd, generally four.
Corol none.
Germ above, egg'd, covered with red powder. *Styles* three, reflected, feathery. *Stigmas* small.
Capsule roundish, three-furrow'd, three-cell'd, three-valved, size of a small cherry, covered with much red powder.
Seed solitary, globular.

It is a native of the inland mountainous parts of the Circars; I never found it any where else. Flowers during the cold season.

The red powder, which covers the capsules, is a noted dying drug, especially among the Moors, and constitutes a considerable branch of commerce from the mountainous parts of the Circars. It is chiefly purchased by the merchants trading to Hydrabad, and other interior parts of the Peninsula.

When the capsules are ripe, or full grown, in February and March, they are gathered, the red powder is carefully brushed off, and collected for sale; no sort of preparation being necessary to preserve it.

This substance like Annotto, is difficultly acted on by water; it communicates no particular taste, either by infusion or decoction, and only a pale straw-colour, which acids scarce alter, but alkalies brighten and deepen. To spirits it very readily gives a rich, deep, flame-coloured orange, inclining to red. Alkaline salts enable water to extract a very deep blood-red, which, on agitation, produces an orange-coloured froth, and tinges the sides of the vial. Neither spirits nor alkaline solutions dissolve it, for the distinct minute grains of the powder are seen adhering, in their original state, to the sides of the vial, when shaken, but are now of a bright gold or orange-colour, about the size of very minute grains of sand: in this it differs widely from Annotto, which is soluble in both these menstruums. Alum added to the alkalized infusion or decoction renders the colour brighter and more permanent; tartar (to appearance) in a great measure destroys it; yet the mixture died white silk of a very beautiful colour, if possible, superior to any other I have tried.

This red powder dies silk a deep, bright, durable orange, or flame-colour of very great beauty. The Hindoo silk diers use the following method:

Four parts of Wassunta-gunda, one of powdered alum, two of salt of soda (native Barilla) which is sold in the Bazars are

* It differs from Rottlera indica, *Willdenow in Götting. Journal der Naturwissenschaft.* 1 *Band.* 1 *Heft. p.* 8, in having three distinct styles.

rubbed well together with a very small proportion of oil of sesamum, so little as hardly to be perceptible; when well mixed, the whole is put into boiling water, proportionate to the silk to be dyed, and kept boiling smartly more or less time, according to the shade required, but turning the silk frequently, to render the colour uniform.

169. CLUYTIA COLLINA.

Cadeshew of the Telingas.

Leaves alternate, short-petioled, two-faced; the smaller orbicular, the larger inverse-egg'd; intire, smooth, shining, size various.
Stipules small, acute, hairy, falling.
Flowers short-peduncled, middle-sized, green; the male and female sometimes mixed in the axills of the leaves; sometimes the male are collected by themselves in little bundles in the axills, and the female solitary in distinct axills; but it often happens that they occupy different trees.
Bractes several, very minute, surround the insertions of the peduncles.

MALE FLOWERS.

Calyx split to very near the base into five segments: divisions half-lanced, withering.
Petals five, very minute, lanced.
Nectary saucer-form.
Stamens: in the centre of the nectary there is a cylindric column, from which, near the apex, issue five ascending filaments, *Anthers* oblong, erect.

FEMALE FLOWERS.

Calyx and *Corolla* as in the male.
Nectary cup-form, closely embracing half the germ: margin slightly notch'd.
Germ above, egg'd. *Styles* three, two-cleft. *Stigma* simple.
Capsule somewhat three-lob'd, smooth, three-cell'd, six-valved, size of a nutmeg.
Seeds, only one in each cell comes to maturity, (though when young there are the rudiments of two) round, smooth, size of a pea.

This is a small tree, a native of the hilly parts of the Circars; flowers during the hot season; seed ripe in December and January.
The bark, or outer crust of the capsules, is said to be exceedingly poisonous.
The wood of the tree is of a reddish colour, uncommonly hard and durable.

170. CLUYTIA PATULA.

Branches very numerous, spread horizontally, forming a large shady head. *Branchlets* two-faced, twiggy.
Leaves alternate, short-petioled, two-faced oblong, attenuated to a pretty long slender point, intire, smooth, shining, about three inches long, and one and a half broad.
Stipules small.
Flowers small, nearly sessile, male and female collected in little

bundles in the axills, sometimes on small axillary interrupted spikes.
Bractes small, numerous, chaffy, surrounding the insertion of the flowers.

MALE FLOWERS.

Calyx as in Cluytia collina.
Petals five, orbicular, crenulated, inserted by claws much smaller than the calyx.
Nectary and *Stamen* as in Cluytia collina.

FEMALE FLOWERS.

Calyx and *Corol* as in the male.
Nectary cup-form, embracing only about a third of the germ.
Germ above, egg'd, hairy. *Styles* 3, two-cleft. *Stigmas* small.
Capsule size of a small cherry, 3-cell'd, 3-valved.
Seed solitary.

This is a much larger tree than the former, and a native of moist vallies. Flowers during the hot season.
Its wood is of the colour of dried rose-leaves, hard and durable.

171. CLUYTIA MONTANA.

Pantinga of the Telingas.

Trunk erect, short and thick.
Branches numerous, spreading. *Branchlets* two-faced, twiggy.
Leaves alternate, short-petioled, two-faced, inverse-egg'd or wedge-form, smooth, intire, from two to three inches long, broad in proportion.
Stipules small, acute, withering.
Flowers small, green, axillary, crowded, sessile, male and female mixed.
Bractes minute, numerous, withering.

MALE FLOWERS exactly as in Cluytia patula.

FEMALE FLOWERS.

Calyx, *Corol*, and *Nectary* as in Cluytia patula.
Germ egg'd. *Styles* two, two-cleft. *Stigmas* simple.
Berry globular, succulent, size of a pea.
Seeds two, oval, one side flat, the other convex.

On the interior mountains it grows to a tree, but on the lower lands it is only found of small size.
The wood, like that of the two preceding species, is very hard, and of a reddish colour.

172. CLUYTIA SPINOSA.

Cora-maun of the Telingas.

Trunk straight. *Bark* scabrous. *Branches* disposed as in the last.
Thorns a few, large and strong, on the larger branches.
Leaves also disposed in the same manner, oblong, pointed, intire, firm, smooth, many parallel protuberant veins, running from the centre to the circumference, about five inches long, and two and a half broad.
Spikes axillary or terminal, interrupted (flowers collected in bundles, leaving the interstices naked.)

Flowers small, greenish-yellow, male and female mixed.

MALE FLOWERS.

Calyx and *Corol* as in the two last species.

Nectary : the saucer-form part, as in the former, and also a cup-form interior part, as if sitting on the other ; it is divided to near the base, into five segments, divisions narrowing towards the point, extremities three-tooth'd.

Stamen as in the former.

FEMALE FLOWERS.

Calyx and *Corol* as in the male.

Nectary bellied, surrounds entirely the germ, leaving only a small opening for the styles to pass, and is there five-tooth'd.

Germ egg'd. *Styles* two, two-cleft. *Stigmas* simple.

Berry globular, size of a pea, succulent, black.

Seeds two, as in the former.

This species is a tree considerably larger than any of the former ; it is a native of the same mountainous countries.

The bark is a strong astringent. The wood is dark-colour'd, hard and durable; the leaves are eaten greedily by cattle, and are said to destroy worms in their bowels.

173. CLUYTIA SCANDENS.

Doonkyboora of the Telingas.

Trunk scarce any. *Bark* rust-colour'd.

Branches long, climbing, with their extremities flower-bearing and pendulous.

Leaves alternate, short-petioled, two-faced, oval, intire, below downy, size various.

Stipules half-lanced, length of the petiole,

Flowers small, yellowish-green, axillary, crowded, sessile, or on interupted leafy, terminal, or axillary, spikes; generally male on one branch, and female on another.

MALE FLOWERS

exactly as in Cluytia patula, except that here the petals are notch'd at their extremities.

FEMALE FLOWERS.

Calyx and *Corol* as in the male.

Nectary double, as in Cluytia spinosa, and in every respect the same.

Germ above, egg'd, hid in the inner nectary. *Styles* two, two-cleft. *Stigmas* simple.

Berry oblong, juicy, smooth, size of a large French bean, and when ripe it is of a rusty-black colour.

Seeds two.

A large woody climbing species, common on banks of rivers and watercourses; flowers in November and December.

174. MIMOSA CINEREA.

Linn. spec. plant. 1505.

Yeltoor of the Telingas.

In general, a low, irregular, rigid, ugly shrub, with a white bark : if sometimes met with in a taller state, it is very thinly branched.

Thorns single, very large, straight, strong and sharp; they often bear leaves and flowers, so that their base then appears as a part of a branchlet.

Leaves alternate on young shoots, and fascicled on the old, twice-feather'd, 2-3 inches long. *Feathers* 6-12 pair, about an inch long. *Leaflets* minute, 12-20 pair.

Stipules awl'd.

Peduncle axillary, short, generally single, bowing, ending in a bowing, cylindric spike of neuter and hermaphrodite corollets.

HERMAPHRODITE COROLLETS round the extremity of the spike.

Calyx and *Corol* as in the genus.

Stamens 10, distinct, inserted into the bottom of the tube of the corollet.

Anthers oblong, and crowned with a gland, as in Adenanthera.

Stigma large.

Legume linear, compress'd, smooth, about three inches long, and one quarter broad, generally curved.

Seeds 10-15.

NEUTER COROLLETS.

Calyx and *Corol* as in the hermaphrodite, but the *filaments* are linear, petal-like, rose-colour'd, and without anthers, as in Mimosa natans.

This species is a native of forests and low barren lands.

The wood of it is remarkably hard, but, on account of the smallness of the tree, it is of little use.

175. MIMOSA CATECHU.

Linn. suppl. 439.

Podæl-Maun of the Telingas.

Trunk in general ill-shaped, covered with rusty-colour'd, crack'd *Bark*, which is particularly red within ; remarkably adstringent, and somewhat bitter.

Branches spread irregularly.

Thorns stipulary, small, most slightly recurved.

Leaves alternate, twice-feather'd, 6-12 inches long. *Feathers* 8-16 pair, opposite, about two inches long. *Leaflets* numerous, often 40 pair, minute. The common petiole has sometimes a few recurved prickles on it. *Glands*, a single large targeted one on the upper side of the common petiole, just below the lower pair of feathers, and one or two (not targeted) between the last pair or two.

Stipules awl'd, falling.

Peduncles axillary, 2-4, short, each supporting a single cylindric spike of yellow corollets.

Filaments numerous, united into one body, just at the base.

Legume straight, smooth, pointed; 3-4 inches long, and less than one broad.

Seeds 5-6.

A large tree, chiefly a native of the mountainous parts of the coast.

The wood is good, and applied to various uses; but the natives have no idea of extracting from it, or any other, the extract called Catechu (Terra Japonica). Yet, I believe there are many trees of this genus, just as fit to yield the extract as the Mimosa catechu.

176. JUSTICIA MONTANA.

Stems many, striated, jointed, smooth, leaning on the ground, and rooting at the joints. Young shoots four-sided.

Leaves opposite, petioled, oval, pointed, declining, running down the petiole, from three to four inches long, and about two broad.

Spikes many, terminal, erect, slender. *Peduncle* four-sided.

Bractes opposite, decussated, linear, acute, hairy, one-flowered; bracteolæ two to each of the bractes, pressing laterally the calyx, like the large exterior one, but much smaller.

Flowers opposite, decussated, of a very pale blue,

A small straggling jointed under-shrub; a native of the mountains. Flowers during the cold season.

177. JUSTICIA PULCHELLA.

Eranthemum pulchellum. *Andrew's bot. reposit. t.* 88.

Stems many, erect, or nearly so, 2-3 feet high.

Branches round; young shoots four-sided, smooth.

Leaves as in the former, but much larger, being from six to nine inches long, and from three to four broad. They are of a much deeper and brighter green.

Spikes as in the former, but larger.

Bractes disposed as in the former, but much larger; broad, ciliated, and stand much nearer one another.

Flowers large, numerous, of a deep bright blue.

A very beautiful flowering shrub; a native of dry, uncultivated, shady places; flowers during the cold season.

178. GRATIOLA MONNIERIA.

Linn. spec. plant. 24.

Sambrany-Tshittoo of the Telingas.

Stems several, annual, creeping, round, jointed, very ramous, smooth, succulent.

Leaves opposite, sessile, inverse-egg'd, wedge-form, or oblong, smooth, entire, obtuse, fleshy, dotted with minute spots.

Peduncles axillary, alternate, solitary, round, smooth, shorter than the leaf, one-flowered.

Flowers blue. *Bractes* two, *a a*, awl'd, press on the calyx laterally.

Calyx five-leaved, the exterior three leaflets, *bbb*, large, oblong; the two interior, *cc*, small, linear; all are concave, smooth, pointed, and permanent.

Corol: tube bell'd, short; border five-parted, nearly equal.

Filaments four, two-powers.

Anthers two, cleft at the base, blue.

Stigma large, somewhat two-lob'd.

Capsule egg'd, two-cell'd, two-valv'd.

Seeds numerous.

A native of moist places, borders of brooks, and the like. Flowering time the wet and cold seasons.

The expressed juice is, by the natives, mixed with petroleum, and applied externally for rheumatic pains.

179. GRATIOLA GRANDIFLORA.

Linn. spec. plant. edit. Willdenow 1. *p.* 105.

Stems several, annual, creeping, four-sided, smooth; six to twelve inches long.

Leaves opposite, sessile, oblong, sharp-saw'd, pointed, smooth. *Peduncle* axillary, about half the length of the leaf, erect, one-flower'd.

Flowers light-blue.

Corol: tube cylindric; upper lip entire; under lip broad, three-parted.

Stamens: the two fertile filaments lodge under the upper lip, approach archwise; steril filaments rest on the under lip and adhere to it; they are yellow and curved. *Anthers* twin, united by pairs.

Capsule lanced, longer than the calyx.

A native of moist places; flowering during the wet and cold seasons.

180. UTRICULARIA STELLARIS.

Linn. suppl. 86. *Vahl symb.* 1. *p.* 6.

Natsoo of the Telingas.

Root conferva-like, floating in the water. I have always found small utriculi adhering to its filaments.

Scape sub-erect, simple, raceme-like, above the verticil of bladders, which rest on the surface of the water.

Grows in sweet water; appears and flowers during the rains.

181. ROTTBOELLIA CORYMBOSA.

Linn. suppl. 114.

Pedda Panoocoo of the Telingas.

Culms many, straight, mostly naked, as the sheaths of the leaves are short, and cover but little of them; round and smooth, from three to five feet high, very firm and not piped.

Leaves few, from six to twelve inches long, margins sometimes fringed with a few hairs; sheaths short and smooth.

Spikes terminal, and from the exterior axills, several, peduncled.

Peduncles thread-form, bowing, or erect, jointed near the base, and there bracted; there are besides, chaffy, thread-form bractes at the insertions of the peduncles.

Flowers alternate in two rows, one on each side of the spikes.

Calyx two-flowered, two-valved.

Corol: one hermaphrodite within, and one male without; each has two valves, but sometimes there is only an hermaphrodite floret, which has then three valves.

A native of low, rich, pasture ground; grows in erect tufts.

182. ROTTBOELLIA PERFORATA.

Panoocoo of the Telingas.

Culms many, erect, simple, round, smooth, jointed, but not piped, from three to five feet high, and about as thick as a crow-quill.

Leaves small for the size of the grass, slender and smooth, margins hispid, mouth of the sheaths and for a little way up the base of the leaves, very woolly.

Spike terminal, and from the exterior axils solitary, peduncled, round, smooth, as thick as a crow-quill; from three to six inches long. *Rachis:* where the flowers are opposite, there is an oblong perforation, so that the backs of the inner glumes of the calyx touch each other.

Flowers in pairs, nearly opposite, on the lower half, or more, of the spike; above alternate, sometimes all hermaphrodite, sometimes hermaphrodite and male intermixed.

Calyx one-two-flower'd, two-valved: valvelets simple, the exterior rigid, the interior firm and white, but obliquely linear-oblong.

Corol: when single it is hermaphrodite and three valved, when double, the exterior one is male, and the two have four valves; all are membranous, and in shape conforming to that of the calyx, but smaller.

This species is rather rare; it grows on low rich pasture ground.

Both species are of a very coarse nature; cattle do not eat them.

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183. GISEKIA PHARNACEOIDES.

Linn. mant. 562.

Ishi-rash-kura of the Telingas.

Stems prostrate, round, smooth, jointed, from one to four feet long, and as thick as a crow-quill.

Leaves opposite, short-petioled, oval, entire, smooth, half or three quarters of an inch long.

Peduncles axillary, many, bowing, one-flower'd.

Flowers small, greenish.

Is annual; and a native of cultivated ground.

The leaves and tender tops are eaten in stews by the natives.

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184. SANSEVIERA ZEYLANICA.

Linn. spec. plant. edit. Wildenow 2. *p.* 159.
Salmia spicata. *Cavan. ic.* 3. *p.* 24. *t.* 246.
Aletris hyacinthoides α. zeylanica. *Linn. sp. plant.* 456.
Katu-kapel. *Rheede Malab.* 11. *p.* 83. *t.* 42.

Bow-string hemp.
Tshama-cada Nar of the Telingas.

Roots perennial, stole-bearing: stoles as thick as the little finger, run under the ground, invested with sheathing scales.

Leaves radical, 4-8, the exterior shortest, spread most, and are considerably broader; the interior nearly erect, from one to four feet long, semi-cylindric, groov'd on the upper side, each ending in a round, tapering, sharp point: they are all clouded with deeper and lighter blue, and somewhat striated; but otherwise they are smooth.

Scape issues from the centre of the leaves, from one to two feet long, (including the raceme or flower-bearing part) erect, round, smooth, about as thick as a small rattan; between the raceme and the base, there are, at regular distances, four or five pointed, alternate, sheaths.

Raceme erect, about as long, or longer, than the scape below the flowers, striated, smooth.

Flowers greenish-white, erect, collected in fascicles of four to six, from little, regularly distant, tubercles of the raceme.

Bractes small, membranous.

Pedicels club'd, short, ascending, one-flower'd.

Calyx none.

Corol one petal'd, funnel-form, half six-cleft: divisions nearly linear.

Filaments length of the divisions of the corol, and inserted into their base. *Anthers* linear-oblong, incumbent, half two-cleft.

Germ three-lob'd. *Style* length of the stamens. *Stigma* three-sided, club'd, entire.

Berries one, two, or three, slightly united above, but each berry globular, fleshy, orange-colour, smooth, size of a pea, one-seeded. It may be remarked, as in Sapindus and Menispermum, that there are the rudiments of three, both in the germ and ripe fruit: but all the three seldom ripen.

Seeds globular.

It grows commonly under bushes in thin jungle, and almost in every soil. Flowering time the cold, and beginning of the hot season, that is, from the beginning of January till May.

In a good soil, and where plants are regularly and moderately watered, the leaves grow to 3-4 high; they contain a number of fine, remarkably strong, longitudinal, white fibres, the length of the leaf, of which the natives make their best bow-strings. To separate the fibres from the pulpy parts, the natives lay a single fresh leaf on a smooth board, and securing one end by the great toe of one foot, they scrape the leaf from them, with a thin slice of wood held by both hands, and quickly separate the pulp. The same purpose is effected by steeping the leaves in water, as practised in Europe with flax and hemp: but I found, upon trial, the colour of the fibres much injured by that mode.

About 80 pounds of the fresh leaves yielded one pound of the clean dry fibres. The leaves were gathered at once, from a small bed of the plants, (scarcely three yards square), which had been planted about twelve months before in my own garden, and they were, upon an average, under two feet long, owing to their having been gathered before they were at their full size. Full grown leaves of 3 and 3½ feet long, yielded proportionally one pound of the clean fibres, from 40 pounds of fresh leaves; eight pounds of such leaves yielding three ounces of clean flax. Hence I conclude that this plant might be cultivated to very great advantage; for even according to the first mentioned rate, of one pound of the fibres, from a bed of three square yards, one acre would yield 1613 pounds of flax at one gathering, and two crops may be reckoned on yearly, in a good soil and favourable season,

after the plants have arrived to a proper age. The plants I used were only twelve months old, which I imagine to be hardly sufficient for yielding the best, and the largest proportion of flax.

There is certainly a great variety of uses to which these fibres might be well applied, probably to more than any other substance yet known. I am inclined to think that the fine line, called China grass, which is employed for fishing-lines, fiddle-strings, and other purposes, is made of these fibres.

The plant is readily propagated from slips, which issue in great abundance from the roots; it requires little or no care, and being perennial, it would not often (if at all) require renewing: indeed the bed in my garden required thinning.

I remember to have seen, some years ago, a bed or two of these plants in Mr. Claud Russell's garden at Vizagapatam, which grew much more luxuriantly than mine have done, and gives me reason to think that a rich sandy soil may suit the plant better than our stiffer soil about Samulcotah. Should it ever become an object of culture, a less expensive and more expeditious method of cleaning the flax from the pulpy parts of the leaves, than that of the natives above described, must be contrived; for as they manage it, that part of the process, would prove a great deal more expensive than all the rest.

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185. DAMASONIUM INDICUM.

Linn. spec. plant. edit. Willdenow. 2. *p.* 276.
Stratiotes Alismoides. *Linn. spec. plant.* 754.

Neer Veneky of the Telingas.

Root fibrous.
Leaves radical, petioled, from oblong-hearted, to broad-hearted, waved, 7-11-nerved, smooth, of a thin membranous texture; size very various, about six inches each way.
Petiole three-sided; length various.
Peduncle radical with the petioles, and of the same length, 4-5-sided, smooth, one-flower'd.
Spathe one-leaved, 5-6-wing'd: wings membranous, waved; mouth 5-6-tooth'd.
Perianth above, three-leaved.
Corol three-petal'd.
Nectary: three inverse-hearted scales grow within the insertion of the petals.
Filaments from 6 to 10, erect. *Anthers* linear, erect.
Germ within the belly of the spathe.
Styles from 6 to 10, half two-cleft.
Stigmas acute.
Capsule oblong, crowned with the withered perianth, six-groov'd, one-cell'd, six-valved.
Seeds numerous, affixed to six sharp keels (receptacles) running on the inside of the sutures of the six valves.

An annual plant, and native of shallow, sweet water; flowering time the rainy season.

186. SYMPHOREMA INVOLUCRATUM.

Suroodo of the Telingas.

GENERIC CHARACTER.

Involucre 6-8-leaved. *Calyx* below, 6-8-tooth'd. *Corol* one-petaled, 6-8-cleft. *Seed* one, inclosed in the calyx.

DESCRIPTION.

Stem woody, large, climbing; bark ash-colour'd.
Branches straight, cross-arm'd.
Leaves opposite, short-petioled, egg'd, grossly saw'd, downy, about three inches long, and two broad.
Peduncles fascicled, from the extremities of the naked branchlets, and last years axills, round, downy, each supporting a single umbellet.
Flowers sessile, small, white.
Involucre six-eight-leav'd, seven-nine-flower'd: leaflets chaffy, lanced, downy, permanent.
Calyx beneath, one-leav'd, tubular, six-eight-striated, six-eight-tooth'd, downy, permanent.
Corol one-petal'd: tube short; border six-eight-cleft: divisions linear, spreading.
Filaments seven-eight, shorter than the corol, inserted just below its divisions. *Anthers* oblong.
Germ round.
Style length of the stamens.
Stigma bifid.
Pericarp none, the remaining wither'd calyx serves for one.
Seed one, globular, smooth, size of a pea.

A large scandent shrub, a native of forests; casts its leaves during the cold season, but they return with the flowers in February, March, and April.

I know of no use made of any part of this shrub, except for fuel.

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187. LAURUS INVOLUCRATA.

Narra of the Telingas.

Trunk erect. *Bark* brown on the trunk and larger branches, on the small, light-ash coloured and smooth.
Leaves scatter'd, petioled, broad-lanced, attenuated into a long slender waved point, three-nerved, (nerves unite above the base, as in Laurus Cinnamomum, and vanish a little above the middle of the leaf,) entire, smooth, above shining, below whitish, 4 to 5 inches long, and 1 and $1\frac{1}{2}$ broad. When they first appear, they are covered with a most beautiful soft satin-like, yellowish silver-down.
Petiole about an inch long, channel'd, slender, bowing.
Stipules none, but many conical scales surround the conical buds, before the leaves expand.
Umbellet axillary, sessile, solitary.

MALE TREE.

Involucre four-leaved, five-floreted: leaves orbicular, concave, falling. Florets short, pedicel'd.
Petals four, oblong, spreading.

Filaments generally five, though sometimes only four, twice the length of the corol, inserted into the petals, near their base. *Anthers* oval.
Nectarial glands generally four, inserted by pairs into opposite petals, one on each side of the filament.
Pistil a small sterile one only.

FEMALE TREE.

Involucre, Corol, and *Nectarial glands* as in the male.
Filaments four or five, very short, and without anthers.
Germ above, globular.
Style length of the petals.
Stigma headed.

A native of the tops of the mountains, where it grows to a small tree of about 24 or 30 feet in height, branches included. Flowers during the cold season. Berries ripe in April.

This tree has much the appearance of Laurus Camphora, every part of it smells strongly of camphor, the roots and berries exceedingly so, and are very acrid.

I have not been able to discover whether it yields any sort of gum or resin, nor do I find that the natives make any other use of it, than occasionally for fire-wood: except that the fresh bark well bruised and mixed with pepper, is by the hill-people employed to cure wounds.

188. ATRAGENE ZEYLANICA.

Linn. spec. plant. 764.

Stems and *Branches* many, climbing over a great extent of bushes.
Leaves opposite, petioled, two'd, terminated by a tendril. *Leaflets* petioled, hearted or obliquely oval, seven-nerved, sometimes remotely saw'd or notch'd, above pretty smooth, below downy, 3-6 inches long, and 2-5 broad. *Petiole* round, about four inches long, apex tendril'd. *Petiolets* curved.
Panicle terminal, and opposite from the exterior axills, cross-armed, thin, diffuse.

I have only found it in hedges and in low moist lands over-run with brush-wood near Samulcotah. Flowers during the wet season.

189. CYRILLA AQUATICA.

Bagga-pattie of the Telingas.

Root creeping.
Stems erect, one or two feet high, round, jointed, a little hairy.
Leaves: the lower (generally under water) verticil'd, number uncertain, feather-cleft, division filiform; above they are three-fold, sessile, broad-lanced, 3-7-nerved, saw'd, smooth.
Raceme terminal, bowing, verticil'd, many-flower'd.
Bractes three-fold, hearted or leaf-like, but smaller, one-flower'd.
Flowers large, beautiful, bluish-violet colour.
Corol: tube widening.
Anthers: both pairs double, connected.

A very beautiful, fragrant, herbaceous plant, growing on the borders of pools; appears and flowers during the wet and cold seasons.

190. HIBISCUS CANNABINUS.

Linn. spec. plant. 979.

Gong-kura of the Telingas.

Stem straight, simple, from 3 to 7 feet high, round, here and there some small inoffensive prickles, otherwise smooth.
Leaves horizontal, alternate, petioled, those below hearted, about the middle of the plant three-four-five-lob'd: lobes lanced, the superior simply linear-lanced, but all are smooth and saw'd; on the under side of the base of the middle nerve is a gland.
Petiole as long as the leaf, underside prickly.
Stipules awl'd.
Flowers axillary, solitary, short-peduncled, very large, pale-sulphur colour, with a deep purple bottom.
Calyx: exterior 7-8-leaved, awl'd, spreading, inserted into the inner calyx near the base; *inner* five-cleft: divisions sharp-pointed, bristly, glandulous round the margins, with a large gland on the middle of each division.

I have found this plant in a cultivated state only. It is herbaceous, of about three months duration.

It is much cultivated by the natives. Its leaves are in general used as an esculent vegetable, and taste something like sorrel. The bark is employed as a substitute for hemp, to which it is much inferior both in strength and durability.

The usual time of cultivation is the cold season, though it will thrive pretty well at all times of the year, if it has sufficient moisture. A rich loose soil suits it best. The seeds are sown about as thick as hemp, but generally mixed with some sort of small or dry grain, rendering it necessary to be sown very thin, that the other crop (which is one of those grain that does not grow nearly so high) may not be too much shaded. It requires about three months from the time it is sown, before it is fit to be pulled up for watering, which operation, with the subsequent dressing, is similar to that hereafter described for Crotalaria Juncea.

Fig. *a.* shows a leaf near the top of a full grown plant.

191. DALBERGIA VOLUBILIS.

Bandy Girgem of the Telingas.

Branches: their extremities in form of tendrils, often twine round whatever they meet with.
Leaves alternate, two-faced, feather'd, with an odd one, four or five inches long. *Leaflets* about five pair, not opposite, nor alternate, but between the two, oval, small, pointed, entire, smooth, interior largest, about one inch long, by three quarters broad.
Stipules scarcely any.
Panicle terminal, large, two-faced, ramifications generally two-fork'd, (standing at right angles.)
Flowers small, very numerous, blue.
Bractes: a small one below each pedicel, and two still smaller pressing on the calyx, oblong, rust-colour'd.
Corol: banner orbicular, emarginated. Keel below two-parted.
Filaments two, lateral, five-cleft, &c. as in Dalbergia paniculata.

Legume pedicel'd, linear-oblong, obtuse, membranous, waved, smooth, from two to three inches long, by one broad, not opening; 1-2-seeded.

This is a very large, woody, species; a native of the mountainous countries on the coast, where it runs over the highest trees.

192. DALBERGIA SCANDENS.

Tscheratally badoo of the Telingas.

Branches pendulous, remarkably long and slender.
Leaves alternate, feather'd, with an odd one, about six inches long. *Leaflets* 3-5 pair, opposite, oblong, or broad lanced, obtuse, smooth, shining, entire, 2-3 inches long, and about one broad.
Petiole channel'd.
Raceme axillary, single, long, bowing.
Flowers fascicled, small, rose-colour'd.
Legume lanced, membranous.
Seed two or three, kidney-form.

A common, very large, woody, climbing, or twining species; flowering during the wet season.

193. CROTALARIA JUNCEA.

Linn. spec. plant. 1004.

Hemp-Crotalaria.
Tchanomoo of the Telingas.

Stem herbaceous, straight, 4-8 feet high, striated from the insertion of the leaves, a little downy, towards the top branchy, and when the plant stands single, still more so.
Leaves scattered, short-petioled, lanced, obtuse, with a small point, both sides covered with soft silver-colour'd hairs, from two to six inches long, and from half to one and a half broad.
Stipules awl'd, small.
Raceme terminal.
Bractes oval, one-flower'd.
Flowers numerous, large, of a most beautiful bright yellow.
Calyx: upper lip two-cleft; under lip three-parted at the middle, and there gaping, at the apex united.
Corol: Banner obtuse. Keel much pointed, slightly twisted at the apex, and closely shut.
Anthers on the shorter filaments linear, on the longer two-lob'd, round-hearted.
Legume sessile, club'd, downy, about an inch and a quarter long.
Seeds numerous, kidney-form.

I have only found it in a cultivated state; where it grows wild I cannot say. Flowering time, or rather that of cultivation, the cold season.

This useful plant yields the Hindoos their best hemp, for they have no idea of the superior quality of the bark of the common hemp-plant (Cannabis), which is indigenous in all parts of India;

but of that plant they only use the leaves as an intoxicating drug.

I have taken some trouble to teach the natives the use of a plant which hitherto they have only abused, by making some of their farmers witnesses to every part of the culture and preparation of the hemp, and which, on being compared with their best Tschanamoo hemp, they were perfectly convinced was infinitely better: at the same time the culture being equally easy, and the produce equally large, I have reason to think a few years will bring it into general use in these parts, and by degrees over India.

The Hemp-Crotolaria is much cultivated by the natives during the cold season. It is sown towards the close of the rains in October or November, and a strong clayey soil suits it best. The farmers say, about 120lbs. of seed to the acre is the usual allowance. It requires no further care than to be covered with the soil, which is done with the common Hindoo-harrow, viz. a bush or two dragged by two bullocks or buffaloes, over the field. In February or March, soon after the flowers drop, and before the seeds are ripe, it is pulled up by the roots, like hemp, half dried in the sun, then tied up in bundles and committed to the water, where it is steeped: the rest of the process is exactly similar to that employed on common hemp. Such plants as are left standing for seed, yield a bark of an inferior quality, so that the time of pulling must be attended to. Of this hemp the natives make their cordage, twine, fishing-nets, and a strong coarse kind of sackcloth called Gunny.

It is the only plant cultivated by the natives of these parts, to feed their milch-cows, during the dry season, and I have found by experience, that it is very nourishing, and produces more milk than most other fodder. It only bears two or three cuttings, after which the plants perish.

194. HEDYSARUM BUPLEURIFOLIUM.

Linn. spec. plant. 1051.

Stem scarce any.
Branches many, sometimes nearly erect, sometimes diffuse, very slender, woody, 1-3 feet long.
Leaves alternate, short-petioled, linear-lanced, smooth, one and a half or two inches long, and one eighth of an inch broad.
Stipules of the petiole chaffy, half-lanced.
Raceme terminal, pretty long.
Bractes three-fold, lanced, two-flower'd.
Flowers small, beautifully variegated with red and yellow.
Calyx four-cleft: upper division end nick'd, apices bearded.
Legume erect, sub-cylindric, composed of 3-5 almost round, pretty smooth articulations.

A small perennial woody species, grows generally among long grass, on dry ground; flowers during the wet and cold seasons.

195. INDIGOFERA LINIFOLIA.

Linn. spec. plant. edit. Willdenow. 3. *p.* 1220.
Hedysarum linifolium. *Linn. suppl.* 331.

Root simple, woody, perennial, long, slender.
Stem none, but many small, slender, round, whitish-grey, ramous, prostrate branches, in general from six to twelve inches long.

Leaves simple, alternate, nearly two-faced, short-petioled, form various, from oval to narrow-lanced, entire, hoary, size various.
Stipules petiolary, dagger'd.
Raceme axillary, sessile, as long or longer than the leaves.
Flowers numerous, small, beautiful bright red.
Legume very small, hoary, globular, one-seeded.

This is the smallest species of the genus which I know. It is a native of dry, sandy, pasture ground.

196. XANTHOCHYMUS PICTORIUS.

Iwara-Mamady of the Telingas.

GENERIC CHARACTER.

Calyx 5-leaved. *Corol* 5-petal'd. *Nectaries* 5. *Stamens* conjoined into 5 bodies. *Apple* 1-5-seeded.

Trunk straight, of a considerable height, covered with scabrous dark-colour'd bark.
Branches numerous, spreading, forming a large shady evergreen head.
Leaves opposite, petioled, linear-lanced, entire, pointed, very smooth, shining, firm, 6 to 16 inches long, and from 1½ to 4 broad. *Petiole* short, colour'd, worm-like, surrounded with annular rugæ.
Stipules none.
Flowers from 4 to 8, form small simple umbels from the axils of last year's leaves, or where they stood; they are white, and when full blown, about the size of a shilling.
Pedicels one-flower'd, smooth, thickening, about an inch long.
Calyx 5-leaved: leaflets concave, orbicular, unequal, permanent.
Petals 5, orbicular, spreading.
Nectary: 5 yellow, short, broad, porous glands surround the germ, standing alternately with the filaments.
Filaments from 15 to 20, conjoined into 5. *Anthers* twin.
Germ above, round.
Style very short.
Stigma targeted, 5-lobed: lobes oblong, spreading.
Pericarp: a round smooth apple, of a middling size, very little pointed at the apex; when ripe, of a beautiful deep yellow colour.
Seeds from 1 to 4, large, oblong, immersed in the pulp of the apple.

A large tree, a native of moist valleys among the Circar mountains; flowers in the hot season. Fruit ripe in November, December, and January.

The ripe apples are eaten by the natives. They are very inviting to the eye, and in taste little inferior to many of our apples in England: I have often eat them myself, and have no doubt, if meliorated by culture, that they would prove a delicious fruit.

The green, but full grown fruit, yields a large quantity of a gum, very like Gummi Guttæ. The best way to obtain it was by cutting the apples across, and, as the yellow juice issued, (which it does rapidly) to scrape it off. It is, when recent, of the consistence of a very rich cream, of a bright yellow colour, considerably acrid, and somewhat nauseous to the taste. In the course of a few days it hardens, and its taste becomes less acrid.

It makes a pretty good water colour, either by itself as a yellow, or in mixture with other colours to form green, &c. It sinks in spirits or water; in the first it is imperfectly soluble, but produces a yellow tincture; it is still less soluble in water, and the tincture is of a less deep colour. Alkaline salts enable the water to dissolve more of the gum, the solution being of a dirty, deep yellow; but both solutions soon become turbid, and most of the gum is precipitated. It melts and burns in the fire into a black coal, with much smoke, but no particular smell.

From wounds made in the bark of the tree, a milky juice exsudes, which soon becomes thick, and as it thickens inclines more and more to yellow. It has no smell and little taste, when first taken into the mouth, but after some time a sense of acrimony and dryness is perceived extending a little way down the throat. This juice, like that collected from the fruit, is imperfectly soluble in spirits.

197. TERMINALIA CHEBULA.

Retz. obs. 5. *p.* 31.

Cadukay of the Telingas.

A large tree, with a tolerably erect trunk, and a large spreading shady ever-green head.
Bark light ash-colour, and pretty smooth, except on the trunk of large trees, where it is very scabrous, and deeply crack'd. Its taste astringent and bitter.
Leaves nearly opposite, petioled, egg'd, above smooth, below covered with a whitish down; round the under side of the margin are many yellow glands, and always two or three of larger size, where the leaf ends in the petiole; length about six inches, breadth three and a half.
Petioles about two inches long, round, have two or more glands on their sides near the apex.
Spike terminal, simple or compound, covered with yellow down.
Flowers small, yellow; they are all, so far as I have seen, hermaphrodite.
Drupe oval, somewhat pentagonal, smooth, when ripe yellow, and about the size of a pigeon's egg.
Nut oval, exceedingly hard.

A native of the mountainous parts of the Circars; flowering time April, May, and June.

This valuable, large tree, yields timber of considerable size, hard, and durable, and is applied to various purposes by the natives. The outer coat of the fruit is much used by the chintz printers and dyers, on the coast of Coromandel. Its astringency serves to fix the colours of the latter, and enables the painters to give better defined outlines to their figures.

With this outer coat of the fruit and salt of steel, I have made a better and more durable ink than what is brought to India from England. By way of comparison, some lines written with it on paper, were exposed to the weather on the same day with two other papers, the one written with best English cake ink, the other with ink made of English ink powder. The result was much in favour of my ink; for while the lines written with it

remained at a certain distance of time fairly legible, those on the other papers were so faded as hardly to be discerned.

The excrescences called by the Hindoos of the Circars Aldecay, and by the Tamuls Cadacay, are galls of an irregular shape found on the leaves of this tree. I know nothing more of their natural history, having never ventured so far among the mountains, as where they are found, but I presume it is similar to that of other galls, that is, they are produced from punctures made on the tender leaves, by some insect, for the reception of her eggs. The natives say they are produced by a particular wind which blows at a certain season of the year. These galls are sold in every market, being one of the most useful dying drugs with which the natives are acquainted. With them and alum, the best and most durable yellow is dyed, and in conjunction with ferruginous mud, a black is procured from them. They are much used also by the chints-painters. They seem to possess a stronger astringent quality than the fruit; at least an ink made with them resisted the weather longer than the ink prepared with the fruit. I have little doubt of these galls being the drug introduced into England under the name of Bengal beans, Fabæ Bengalenses, and recommended as a strong astringent.*

I have found upon the leaves of the tree the larva of a Coccus or Chermes. They are about three-eighths of an inch long, and a quarter of an inch broad, flat below, convex above, and composed of twelve annular segments. Eyes obscure, upon the anterior margins; antennæ short, hairy, moniliform; mouth between the anterior pair of legs. Legs 6, hairy, for creeping only. No tail. They are replete with a bright, rich yellow colour.

Could these insects be collected in any quantity, I am inclined to think, that they might prove as valuable a yellow dye, as the red dye procured from the cochineal insect. The following is the Hindoo directions for dying yellow, with Myrobalan galls.

For dying six square yards of bleached Calico.

The cloth is first bucked with cow-dung, and afterwards well washed. Half a pound of the galls in powder, is infused in a quantity of boiling water, sufficient for twice wetting the cloth.

In the infusion when cold, the cloth is repeatedly dipped, till completely wetted; then, without wringing, well dried either in the sun or the shade. The same operation is once more repeated in the remnant of the same cold infusion.

The dried cloth is now to be steeped in a solution of alum, and again well dried. Finally it is washed in an alkaline lye.

From my own experiments, I think that the alkaline lye hurts the colour; that the dye may be improved by preparing the cloth with a solution of alum, and that some slight degree of coction is required to extract the colouring principle of the galls.

Of the medical virtues of the Myrobalans, I have nothing to offer from my own experience. They are disregarded by the late writers on the materia medica in Europe, and the colleges of London and Edinburgh have rejected them from their catalogues of officinal simples.†

* Dale Pharmacologia, p. 305. Geoffroy Medicamens Exotiques, Vol. III. p. 131.

† The Myrobalans continue still in repute among the Arab physicians in Syria and Egypt, under the name Haleelidge, هليلج *P. Russell.*

198. TERMINALIA BELLERICA.

Myrobalanus Bellerica. *Breyn. icon.* 18. *tab.* 4.
Tani. *Rheed. mal.* 4. *p.* 23. *t.* 10.

Toandy of the Telingas.
Tandra Maram of the Tamuls. *Kœnig.*

Leaves crowded about the extremities of the branches, petioled, oval, entire, firm, smooth, six or seven inches long, and two and a half broad.

Petioles round, 2-3 inches long; two opposite glands on the upper side of the apex and sometimes one near the base.

Spike axillary, solitary, simple, erect.

Flowers small, dirty gray colour. Male towards the apex of the spike, hermaphrodite below.

Drupe oval, somewhat pentagonal, size of a nutmeg, fleshy, covered with a gray silky down. The kernels of the fruit are eaten by the natives; they taste like filberts, but are reckoned intoxicating when eaten in great quantity.

This species is also a native of the mountainous parts of the Circars; one of the largest trees, with an erect trunk and a very large spreading head.

The natives do not use any part of the fruit of this tree in medicine, so far as I can learn. The wood is white, rather soft, not durable, and seldom used. From wounds in the bark, very large quantities of an insipid gum issues, which resembles gum arabic, is perfectly soluble in water, and burns in the flame of a candle into black gritty ashes, with little smell in fuming. The flowers have a strong offensive smell, not unlike Sterculia fœtida.

199. MIMOSA EBURNEA.

Linn. suppl. 437.

Trunk very trifling.

Branches remote, spreading in every direction, exceedingly stiff.

Bark ash-colour'd.

Thorns stipulary, very large, united at the base, straight, round, smooth, very sharp and solid, covered (except the sharp brown point) with a white, smooth crust; from 1 to 2 inches long.

Leaves scatter'd, twice-feather'd, hairy, about an inch long. *Feathers* 4-8 pair, half an inch long. *Leaflets* 6-12 pair, exceedingly minute.

Gland one, large, flat, on the common petiole, just below the lowermost pair of feathers.

Peduncles axillary, from three to six, length of the leaves, jointed and bracted near the middle, each bearing a small globular head of yellow corollets.

Stamens many, distinct.

Receptacle of the corollets chaffy, as in many of the syngenesious plants. Chaff wedge-form. Apex ciliated, length of the calyx.

Legumes very numerous, about three-eighths of an inch broad, and two or three inches long, but twisted in various directions.

Seeds 8-12.

Is a native of forests; a small ill looking tree, or large ramous rigid shrub. Flowering time the cold season.

200. MIMOSA OCTANDRA.

Wallagdoora, or Poota-corinta of the Telingas.

Stems or *Branches* many, climbing, interwoven one with another, woody; young parts somewhat angular, and armed with innumerable sharp, recurved prickles, otherwise smooth.

Leaves alternate, twice-feather'd, 4-5 inches long. *Feathers* 3-4 pair, an inch and a half long. *Leaflets* 6-10 pair, oval, smooth.

Petiole common, armed on the under side.

Stipules half-lanced.

Peduncles axillary and terminal, from one to six, round, smooth; each bears a globular head of orange-colour'd corollets.

Calyx and *Corol* five-tooth'd.

Stamens eight, distinct.

Legumes recurved, membranous, jointed; margins prickly.

A middle sized, climbing, brier-like, species; grows in thickets, on the banks of aqueducts, and other moist places.

Schrebera Swietenioides

Olax scandens

Cansjera scandens

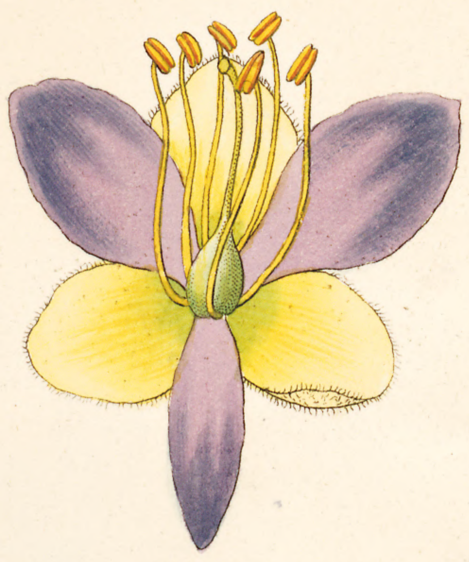
Cuscuta reflexa

Menyanthes cristata

Cinchona excelsa

Tradescantia axillaris

Tradescantia tuberosa



Tradescantia paniculata.

Pontederia vaginalis

Pontederia hastata

Bergera Koenigii

Dalbergia latifolia

Dalbergia paniculata.

Dalbergia rubiginosa

Pterocarpus marsupium

Manisuris myurus.

Manisuris granularis

Mimosa natans.

Mimosa odoratissima

Mimosa procera.

Mimosa amara

Ficus glomerata

Ficus oppositifolia

Ficus comosa

Amomum roseum.

Mackenzie Omnes fecit.

Justicia acaulis.

Gratiola hyssopioides.

Gratiola juncea.

Hippocratea indica.

Pommereulla Cornucopiæ.

BN

Rottboellia setacea.

Rottboellia Thomæa.

Ammannia octandra.

Gardenia latifolia.

Gardenia uliginosa.

Gardenia dumetorum.

Gardenia fragrans.

Anthericum tuberosum.

Loranthus bicolor.

Loranthus Scurrula.

Feronia elephantum.

Bergia aquatica.

Ægle Marmelos.

Bignonia spathacea.

Bignonia quadrilocularis.

Streptium asperum.

Tetranthera apetala.

Tetranthera monopetala.

Mimosa arabica.

Mimosa leucophloea.

Curcuma montana.

Justicia repens.

Justicia pectinata.

Gratiola veronicifolia.

Gratiola oppositifolia.

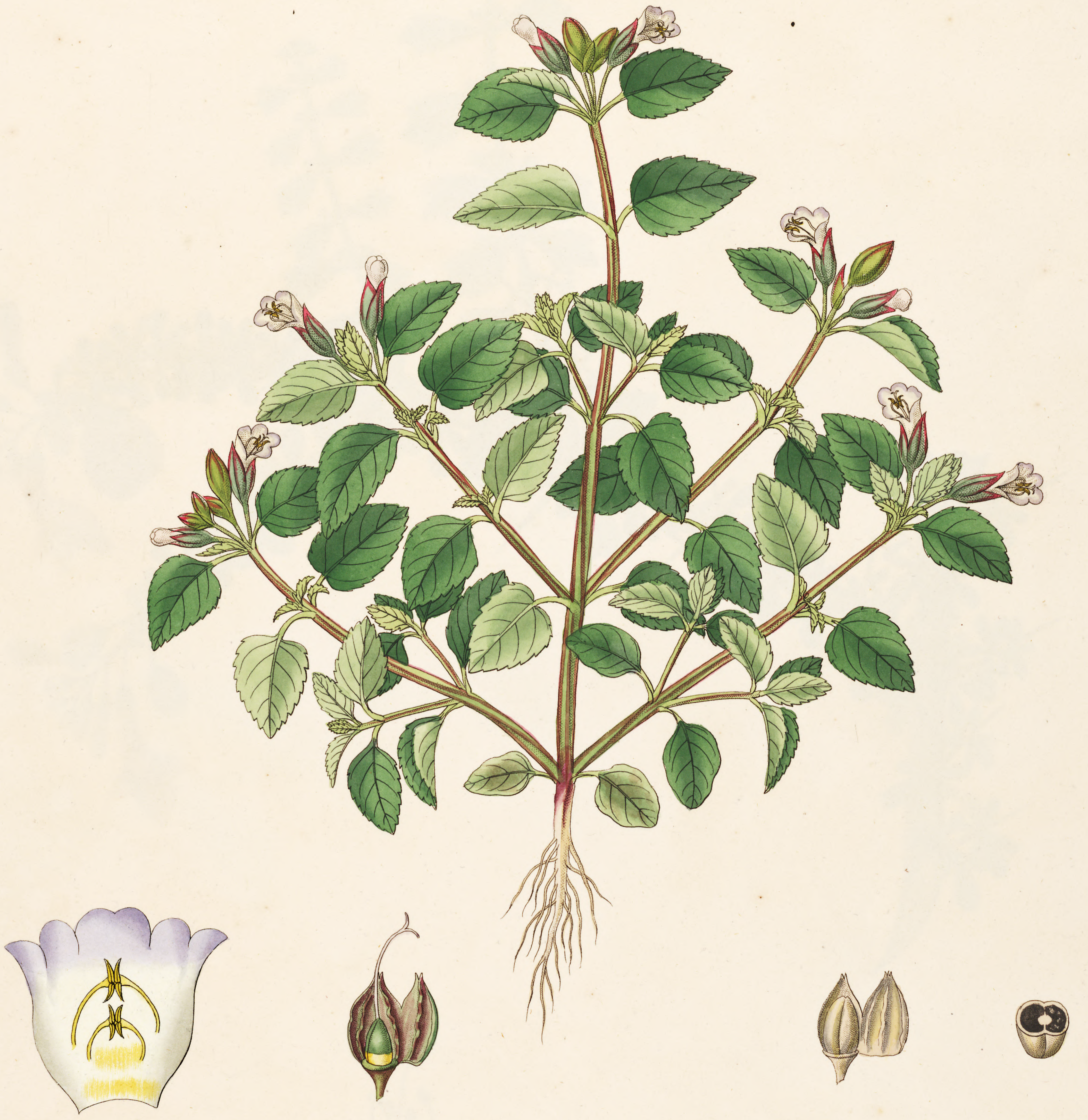
Rottboellia compressa.

Rottboellia exaltata.

Opilia amentacea.

Erycibe paniculata.

Triopteris indica.



Torenia cordifolia

Gmelina parvifolia.

Stemodia viscosa.

Serpicula verticillata.

Vallisneria octandra.

Stilago diandra.

Antidesma pubescens.

Rottlera tinctoria.

Cluytia collina.

Mackenzie Omnes fecit

Cluytia patula.

Cluytia montana.

Cluytia spinosa.

Claytia scandens.

Mimosa cinerea.

Mimosa Catechu.

Justicia montana.

Justicia pulchella.

Gratiola Monnieria.

Gratiola grandiflora.

Utricularia Stéllaris.

Rottboellia corymbosa.

Rottboellia perforata.

Gisekia pharnaceoides.

Engraved by F. Sansom

Sanseviera zeylanica

Damasonium indicum.

Symphorema involucratum.

Laurus involucrata.

Atragene zeylanica.

Cyrilla aquatica.

Hibiscus cannabinus

Dalbergia volubilis.

Dalbergia scandens.

Crotalaria juncea.

Hedysarum bupleurifolium.

Indigofera linifolia.

Xanthochymus pictorius.

Terminalia chebula.

Terminalia bellerica.

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